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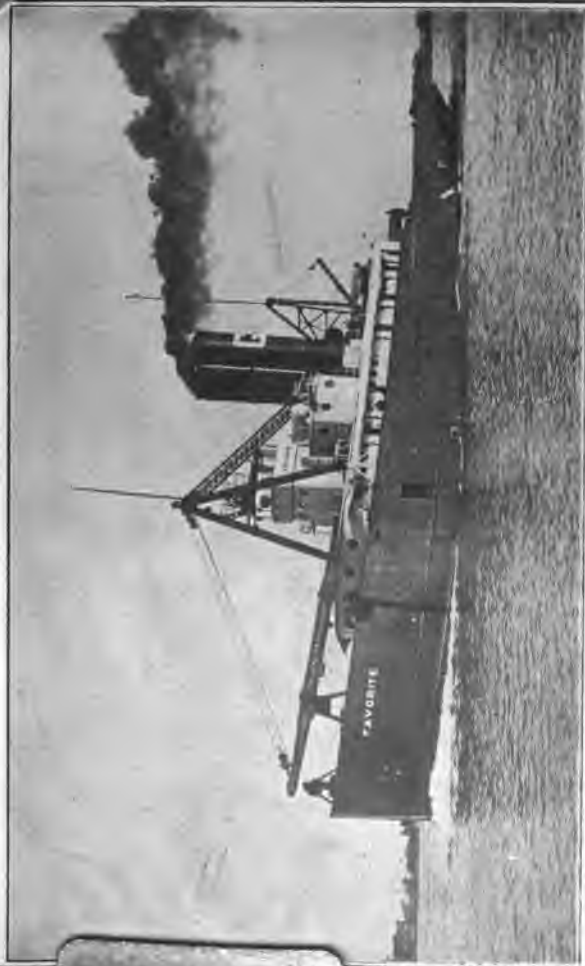
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1920



SHIP MASTERS
ASSOCIATION

DIRECTORY



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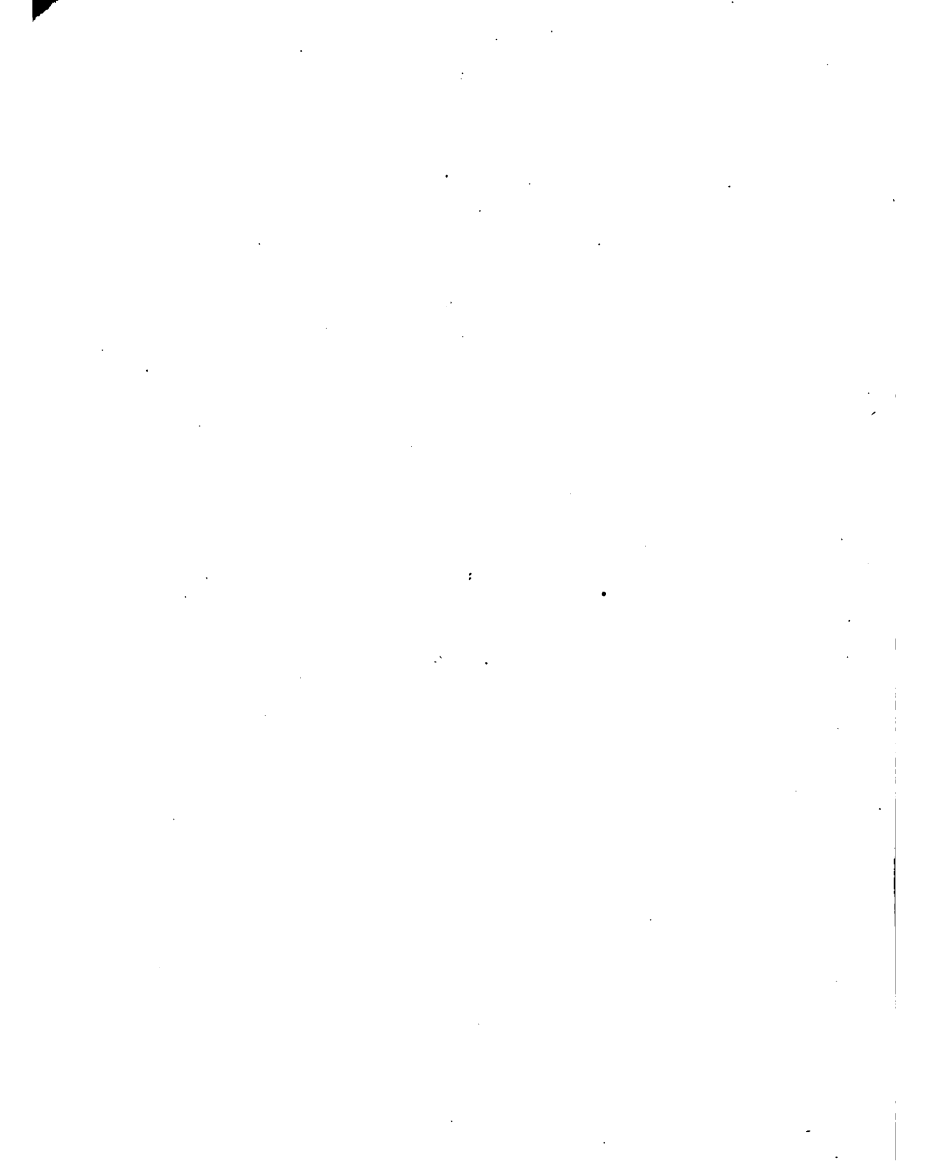
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OF NAMES, PENNANT NUMBERS AND ADDRESSES
OF ALL MEMBERS OF THE

International

Ship Masters' Association of the Great Lakes

Also a List of Vessels of the Great
Lakes, American and Canadian, with
Names and Addresses of Owners

Other Information of a Miscellaneous
Nature of Interest in Shipping
Circles on the Great Lakes

APRIL, 1920

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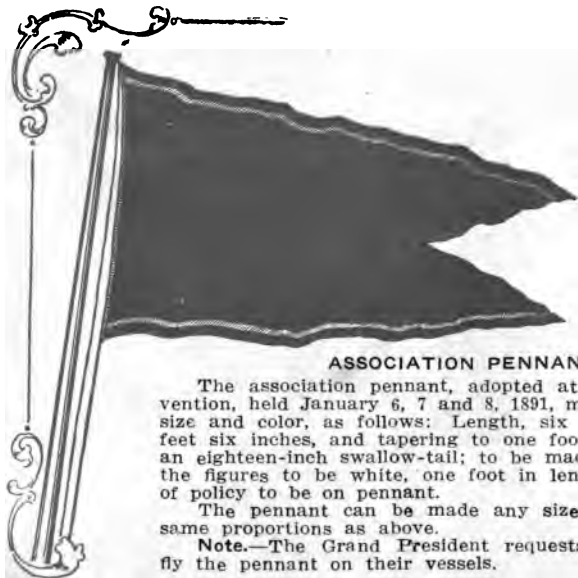
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1920



GRAND PRESIDENT'S FLAG



ASSOCIATION PENNANT

The association pennant, adopted at the Buffalo convention, held January 6, 7 and 8, 1891, must be of uniform size and color, as follows: Length, six feet; width, three feet six inches, and tapering to one foot six inches, with an eighteen-inch swallow-tail; to be made of red bunting; the figures to be white, one foot in length. The number of policy to be on pennant.

The pennant can be made any size by giving it the same proportions as above.

Note.—The Grand President requests all members to fly the pennant on their vessels.



CAPT. L. C. DeNIKE, Grd. Pres.
147 Highland Avenue
Highland Park. Mich.



CAPT. J. D. BAIRD, Grd. Treas.
605 Main Street
Marine City - Mich.



CAPT. M. F. MORGAN, Grd. Secy.
2115 Summerdale Ave.
Chicago. Ill.



MEMBERS GRAND LODGE

Top row standing left to right. Cap't. S. V. Anderson, Cap't. A. W. Stalker, Cap't. D. M. Crooker, Cap't. Jos. R. Acton, Cap't. Richard Jackson, Cap't Charles Rinn, Cap't Richard O'Connor.
Bottom row sitting left to right. Cap't. Jos. R. Brownell, Cap't. Fred R. Slater, Cap't. Lee. C. DeNike, Cap't. M. F. Morgan, Cap't. John. D. Baird, Cap't. Wm. J. Crosby, Cap't. Jas. J. Ferguson.

Grand Lodge Officers

1920

Grand President	Lee C. DeNiko
147 Highland Ave., Highland Park, Mich.	
1st Vice Grand President	Fred R. Slater
5829 Johns Ave., Superior, Wisc.	
2nd Vice Grand President	Jos. R. Acton
22 Lythe Ave., Buffalo, N. Y.	
Grand Treasurer	John D. Baird
605 Main St., Marine City, Mich.	
Grand Secretary	M. F. Morgan
2115 Summerdale Ave., Chicago, Ill.	
Chaplain	Joseph R. Brownell
Marshal	Charles Rinn
Warden	S. V. Anderson
Sentinel	Jas. J. Ferguson
1st Past Grand President	Alex. Clark
2nd Past Grand President	C. E. Benham
3rd Past Grand President	Geo. McCullough
4th Past Grand President	W. E. Rice
5th Past Grand President	Henry Leisk
6th Past Grand President	A. J. McKay
7th Past Grand President	Chas. H. Hubbard
8th Past Grand President	J. A. Ward
9th Past Grand President	W. D. Hamilton
10th Past Grand President	H. H. Parsons
11th Past Grand President	Jas. A. Calbick
12th Past Grand President	W. D. Ames
13th Past Grand President	M. G. McIntosh
14th Past Grand President	Jno. H. McDonald
15th Past Grand President	Jno. H. Sinclair
16th Past Grand President	Jas. G. Herbert
17th Past Grand President	Chas. T. Bronson
18th Past Grand President	Millard M. Stewart
19th Past Grand President	C. J. Auttersen
20th Past Grand President	A. C. Smith
21st Past Grand President (Three Consecutive Terms)	Wm. J. Crosby
22nd Past Grand President	W. L. Girardin



Past Grd. Pres. C. T. Bronson, Henry Leisk, A. J. McKay, Chas. H. Hubbard,
M. G. McIntosh, C. E. Benham, Jas. Calbick, W. E. Rice,
Millard M. Stewart, W. D. Hamilton, Wm. J. Crosby, J. H. McDonald, A. C. Smith,
H. H. Parsons, C. J. Auttersen, Jas. G. Herbert, Alex. Clark,
Wm. D. Ames, Geo. McCullagh, W. L. Girardin, J. A. Ward.

STORM SIGNALS

As displayed on the Great Lakes at United States Weather Bureau Stations



N. E. Storm.



S. E. Storm.



N. W. Storm.



S. W. Storm.



Information Signals (red or white pennant) displayed alone have been discontinued.

Hurricane or very
severe storm

DISPLAY SIGNALS.

UNITED STATES. Small Craft Warning. A red pennant indicates moderately strong winds will interfere with safe operation of small craft. No night display.

Violent Storms are indicated by day signals comprising a square red flag with black square center and either a red or white pennant, and by night signals composed of lanterns, either red or red and white; the color and position of the pennants or lights showing the initial direction of the wind, as follows:

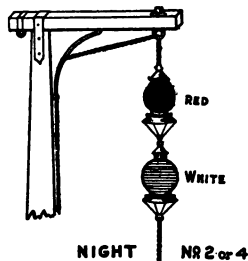
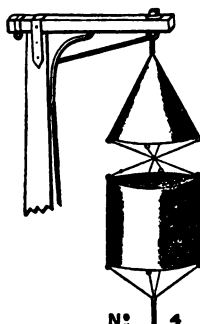
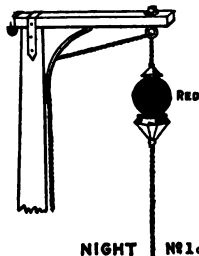
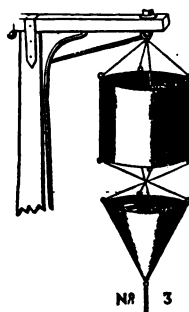
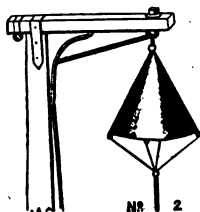
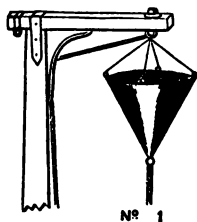
Northeast Storm. Red pennant above square flag; or two red lanterns, one above the other.

Southeast Storm. Red pennant below square flag; or one red lantern.

Southwest Storm. White pennant below square flag; or white lantern below red lantern.

Northwest Storm. White pennant above square flag; or white lantern above red lantern.

Hurricane Warning. Two square flags, one above the other; or two red lanterns with white lantern between; indicates an extremely severe or dangerous storm.



CANADIAN STORM WARNINGS

Fig. No. 1.—This signal indicates the probability of a gale, at first from an Easterly direction.

Fig. No. 2.—This signal indicates the probability of a gale, at first from a Westerly direction.

Fig. No. 3.—This signal indicates the probability of a heavy gale, at first from an Easterly direction.

Fig. No. 4.—This signal indicates the probability of a heavy gale, at first from a Westerly direction.

The night signal corresponding to Nos. 1 and 3 is a red light.

Night signal corresponding to Nos. 2 and 4 is a red light above a white light.

Note I.—Mariners will be able to obtain further information from Signal Agents, or by consulting the daily forecasts.

Note II.—Mariners must always bear in mind that the storm signals do not necessarily mean that storm will occur at the place where the signal is displayed, but that one is expected either there or within such a distance that vessels leaving port would be liable to be caught in it.

R. F. STUPART, Director.

Meteorological Office, Toronto.

The International Ship Masters' Association

Its Aims and Objects Who Are Its Members

Extracts from Constitution

Article I—Purposes of the Association.

Sec. 2. The purpose of this Association shall be to improve and elevate the characters of its members, to create a brotherly feeling, to visit the sick, render necessary assistance in case of death, to provide for a beneficiary fund, and to pay the same to the family of deceased members or as may be otherwise directed.

Article V—Membership.

Sec. 1. Every applicant for membership in this Association shall hold a master's certificate issued by the United States or Canadian Government, in force at the date of his becoming a member. He must also have been actively engaged in sailing within a period of two years prior to the date of his application for membership.

EARLY HISTORY OF INTERNATIONAL SHIP MASTERS' ASSOCIATION

By John H. Ivers

In the winter of 1886, the First Mate of the Str. Boston of the Western Transit Company of Buffalo, New York, died. Capt. John H. Ivers, then master of the Str. Fountain City, a propeller in the Western Transit Company, went to the home of the family of his departed friend to offer his services and his sympathy. The widow very reluctantly told Capt. Ivers that she had no money and asked him for the loan of \$50.00 to defray the expense of burying her husband. The Captain, not having that amount with him, told the widow that he would return with the amount later that evening. After leaving the house, Capt. Ivers went to the store of Felthouse & Russel, a vessel supply house located on Main Street, and a place where the licensed officers of steamboats used to congregate, and there he met several masters and mates and told them about the circumstances of the family of the deceased mate. Among those present were Capt. Martin Niland, Capt. John Disset, Capt. George Dagg, Capt. Wm. Dickson, Capt. James Condon, and Capt. James Drake.

Capt. Ivers told his associates that this family needed money and would not be able to pay it back. Capt. Niland then took off his cap, placed a five dollar bill of his own into it, and passed it around; those present at that time, and those who came in later, contributed and in a short time the donations amounted to \$125.00. Capt. John Ivers, then master of the Str. Fountain City, and Capt. James Condon, then master of the Str. Arctic, were detailed to take the \$125.00 to the widow, which they did that evening. The widow was very grateful and began to cry, saying that she did not know how she would repay the kindness and that she would pay the money back even if she had to take in washings and that it was her wishes and prayers that no other widow of a Ship Master would be placed in like circumstances upon the death of her husband. The Captains assured her that there would be nothing to pay back as this money was a donation from the friends of her husband, who were employed on the line boats.

After Captain Ivers and Capt. Condon returned to the store of Felthouse & Russel, a general discussion arose about forming a little society among members of the profession, where in case of the death of a member the widow or beneficiary would receive \$100.00, each member being assessed his portion.

This being the last of the week it was agreed that a meeting be held on the following Tuesday evening in a small hall above the vessel supply store (the use of the hall being donated by the owners of the store), for the purpose of organizing a beneficial association.

Fifteen licensed officers of the line boats assembled in the hall above the store on the following Tuesday evening and Capt. Wm. Dickson was elected chairman, and later the same evening was elected president; and Capt. James Condon was elected secretary. Capt. John Disset was appointed a committee of one to take the necessary steps to secure a charter for this new society, then known as the Excelsior Marine Benevolent Association.

The managers and owners of the different steamboat lines, thinking that this new association was a labor organization later to become affiliated with the Knights of Labor, objected to their masters and mates joining it. But when it was explained to them the purpose of this organization, and that it was never to be a labor

organization and always to be a Benevolent Association, they withdrew their objections and offered to help make up the \$100.00, that was to go to the beneficiary on the death of a member, in case there was a shortage.

A meeting was held every Tuesday evening until the charter was secured from Albany, New York. After securing the charter, a discussion arose about numbering the members as they joined the Association. Owing to the fact that Capt. Niland had rendered the new association such valuable service, along the line of creating a favorable opinion of this Association among the vessel managers and owners, the members thought it fitting to honor him by giving him Number 1.

Capt. John Disset thought that if honors were being given that he, too, should be given a small number in place of Number 15. None of the members cared to give up their numbers until Capt. John Ivers spoke up and said, "I will change with Capt. Disset and take Number 15 instead of Number 4."

Later in the spring, when it became known that the owners and managers did not object to their licensed men belonging to this Association, seventeen more men were taken in before the opening of navigation, making a membership of thirty-two, the members then thinking themselves in a flourishing condition.

The wife of Capt. Disset (who was formerly a school teacher) with the aid of an attorney (who was a friend of the family) drew up the first constitution and by-laws and also secured the first ritual. This constitution, by-laws and ritual were changed in January 1889, when the Grand Lodge was formed in Buffalo.

Capt. John Ivers, in the spring of 1887, left the employ of the Western Transit Company and went as master of the Str. Colorado which was purchased by F. W. Botsford of Port Huron. Owing to the fact that the Colorado was to run between Port Huron and Duluth, the Captain moved back to Port Huron.

In the winter of 1887 and 1888, in order to increase the membership of Buffalo Lodge, Capt. Ivers solicited new members in Port Huron; but the men of Port Huron thought they should have a lodge of their own in town. Capt. Ivers then wrote Capt. Alexander Clark, who was at that time President of Buffalo Lodge, for information in regard to forming a new lodge in Port Huron. Capt. Clark's reply was that he would take the matter up with the officials in Albany, New York, from whom they had secured the Buffalo charter.

In due time, Capt. Ivers of Port Huron received word from Capt. Alexander Clark of Buffalo that a lodge could be organized in Port Huron as a branch of the Buffalo Lodge, to work under the Buffalo Lodge's charter; and that if twenty prospective members could be secured he would come to Port Huron and organize Lodge Number Two. In a few days he came to Port Huron and organized with a charter membership of twenty-two.

Capt. John H. Ivers, being still a member of Buffalo Lodge, and, consequently not eligible to be elected president of Port Huron Lodge, Capt. Frank Danger was elected president and Capt. Wm. Hutchinson, secretary. There were no other officers at that time.

Capt. Ivers then withdrew from Buffalo Lodge, and joined Port Huron Lodge, becoming its president for the winter of 1888-1889 and was also delegate to Buffalo in the year 1889 at the time that the Grand Lodge was formed with Capt. Alexander Clark its first president, the Grand Lodge still retaining the name E. N. B. A. which about three years later was changed to Ship Masters' Association.

At the first meeting of the Grand Lodge it was decided to form a subordinate lodge in other lake ports, and then came Chicago, Number Three, and on as the numbers indicate.

TO BE CONTINUED IN OUR NEXT EDITION.

Lodge No. ADDRESSES OF SECRETARIES.

- 1 Jos. M. Green 529 Woodlawn Ave., Buffalo, N. Y.
- 2 D. M. Sinclair 2037 Military St., Pt. Huron
- 3 M. F. Morgan 2115 Summerdale Ave., Chicago
- 4 C. L. Allan 10 Forest City Bank Bldg., Cleveland
- 6 Jno. McSweeney 459 Maryland Ave., Milwaukee
- 7 C. G. Merckel 122 Stanton St., Detroit
- 8 L. M. Baird 330 Woodworth, Marine City
- 9 E. G. Ashley 206 Chamber of Commerce, Toledo
- 10 J. J. Powers 85 Elizabeth St., Ogdensburg, N. Y.
- 11 J. P. Stewart Algonac, Mich.
- 12 Albert Swenson 1001 Torrey Bldg., Duluth, Minn.
- 14 Jos. C. Burk 206 4th St., St. Clair, Mich.

ASSOCIATION HEADQUARTERS.

- 1 Buffalo, N. Y. 202 Main St.
Saturdays, 2:30 P. M.
- 2 Port Huron, Mich. Jenkinson Block, Military and Water Sts.
Thursdays, 2:30 P. M.
- 3 Chicago, Ill. New Quarters in Fall
Thursdays, 2:00 P. M.
- 4 Cleveland, Ohio 307 Superior Ave., N. W.
Fridays, 2:00 P. M.
- 6 Milwaukee, Wis. Chamber Com. Bldg., Michigan & Broadway
Thursdays, 2:00 P. M.
- 7 Detroit, Mich. 316-318 Broadway, Market Bldg.
Tuesdays, 2:30 P. M.
- 8 Marine City, Mich. Zimmerman Block, Jefferson & Water Sts.
Saturdays, 7:30 P. M.
- 9 Toledo, Ohio Chamber of Commerce Bldg.
Wednesdays, 7:30 P. M.
- 10 Ogdensburg, N. Y. 61 Ford St.
Wednesdays, 7:30 P. M.
- 11 Algonac, Mich. J. P. Stewart Bldg.
Thursdays, 2:30 P. M.
- 12 Duluth, Minn. 1001 Torrey Bldg.
1st and 3rd Tuesday Evenings
- 14 St. Clair, Mich. Beyschlag Block, Riverside & Jay Aves.
Tuesdays, 2:00 P. M.

A Letter To Members of the Association.

Brothers:—

Our obligation "Strive to Promote the Welfare of our Association" should make us all think and ask ourselves "What are we doing to keep that obligation?"

Do we believe it is sufficient just to pay our Dues and Assessments when they become due, or is there not something else that we could do to make the welfare of our members a little bit better than at present?

We should not think only of the protection we give our loved ones at home by being a member of the Association, but we ought to feel proud of having the opportunity of contributing our little bit, to the wife, mother or children of a brother who passes from amongst us.

At times we have paid a beneficiary who did not need it, but in the great majority of claims paid it has helped to place the dependents in a position to adjust themselves to the altered condition of their incomes, and before "TIME" (the great softener of all sorrow) has its work.

What do we do to one another during the season of navigation? Is there not some little thing said or done that would have been better by far left unsaid or undone? Would it not be better to live the time honored motto "The Faults of our Brothers write upon the sands, but their virtues write upon tablets of love and memory."

Our Meeting Places in the winter time are a source of pleasure for all those who meet there. Let us tell Masters, and Mates who have Master's papers, what the possibilities are if all men holding a Master's license became one of us.

We should induce our Mates to become Members just as soon as they receive their Master's license.

By doing these things, don't you think you would be "Striving to Promote the Welfare of this Association?"

Yours fraternally,

CAPT. C. L. ALLEN, Secretary,

Cleveland Lodge No. 4, I. S. M. A.

LIST OF ACTIVE MEMBERS

Pen. nant Lodge	Name	Address	City
1705 1	Acton, Jos. R.	22 Lythe Ave.	Buffalo, N. Y.
1867 1	Abel, Wm.	Queen St.	Port Dalhousie, Ont.
1892 1	Apsey, Arthur A.	45 Harvard Pl.	Buffalo, N. Y.
1700 3	Anderson, Alex. A.	3037 Clifton Ave.	Chicago, Ill.
1498 3	Anderson, Sigfrid	2208 N. Kimball St.	Chicago, Ill.
1701 3	Atkinson, G. E.	1904 N. Laundale Ave.	Chicago, Ill.
2166 3	Anderson, H. E.	1950 Lincoln Ave.	Chicago, Ill.
2500 3	Anderson, Chas.	South Manitou Island	Mich.
307 4	Ames, Wm. D.	15514 Detroit Ave.	Lakewood, O.
570 4	Anderson, Joseph	7108 W. Clinton Ave.	Cleveland, O.
1038 4	Allen, Samuel C.	1403 W. 65th St.	Cleveland, O.
1116 4	Allen, C. L.	10 Forest City Bk. Bldg.	Cleveland, O.
1321 4	Anderson, Mathew	1064 E. 99th St.	Cleveland, O.
1368 4	Anderson, Chas. A.	Wooster Road	Rocky River, Ohio.
1641 4	Anderson, P. A.	N. Ridge Road	Geneva, Ohio.
1816 4	Allen, Merton G.	2050 Evelyn Ave.	Lakewood, Ohio.
2337 4	Armsbury, W. F.	2 Pennsylvania Ave.	Ashtabula Harbor, O.
488 6	Anderson, O. N.	120 Temple Ct. Bldg.	Minneapolis, Minn.
1513 6	Anderson, Gus.	Str. Argus, Detroit, Mich.	River Station
1940 6	Alexander, Algie		Kewaunee, Wis.
2170 6	Andrews, Andrew	2703 Chestnut St.	Milwaukee, Wis.
2998 6	Ashby, Harry	528 W. 9th St.	Manitowoc, Wis.
253 7	Armstrong, B.	207 Blain Ave.	Detroit, Mich.
671 7	Ashley, W. A.	963 Bartlett Ave.	Milwaukee, Wis.
1411 7	Anderhalt, L. P.	137 Blain Ave.	Detroit, Mich.
2097 7	Atkinson, Chas. L.	630 Virginia Pk. Ave.	Detroit, Mich.
854 9	Ashley, E. G.	206 Chamber Commerce	Toledo, O.
1916 9	Adams, Joseph	2781—14th St.	Detroit, Mich.
1733 10	Anderson, S. V.	33 State St.	Ogdensburg, N. Y.
1328 11	Ames, Augustus		Algonac, Mich.
1783 11	Ames, Wm. J.		Algonac, Mich.
2047 11	Atkinson, Geo. A.		Algonac, Mich.
1689 12	Autterson, Chas. J.	4212 W. 4th St.	Duluth, Minn.
2506 12	Arnsten, Theo. A.	119 E. 3rd St.	Duluth, Minn.
1963 14	Autterson, Jos. W.	402 Trumbell Ave.	St. Clair, Mich.
2104 14	Autterson, Jno. T.	402 6th St.	St. Clair, Mich.
2179 14	Albison, Clarence		Mooretown, Ont.
2486 14	Anderson, W. M.	909 7th St.	St. Clair, Mich.

Pen. nant Lodge	Name	Address	City
104	1 Berow, Joseph H.	R. F. D. 5, Box 37	Cullman, Ala.
319	1 Buie, Daniel	433 W. 60th St.	Chicago, Ill.
1294	1 Burns, John J.	166-16th St.	Buffalo, N. Y.
1610	1 Barclay, John	380 Hudson St.	Buffalo, N. Y.
1651	1 Brooks, Wm. H.	57 Royal Ave.	Buffalo, N. Y.
1716	1 Bennett, Chas. D.	59 Bedford Ave.	Buffalo, N. Y.
1727	1 Broderick, Benj.	Brown & Co.	Buffalo, N. Y.
1945	1 Burns, James	41 South St.	Buffalo, N. Y.
2293	1 Barry, Fred	360 Katherine St.	Buffalo, N. Y.
804	2 Brown, C. T.	1326 Euclid Ave.	N. W. Washington, D.C.
995	2 Budd, Melvin A.	P. O. Box 283	Erie, Pa.
1021	2 Bennett, Jas. S.	246 Fletcher St.	Tonawanda, N. Y.
1101	2 Burns, John	1017 8th St.	Port Huron, Mich.
1503	2 Bradshaw, John L.	1013 Lincoln Ave.	Pt. Huron, Mich.
1768	2 Brown, Chas. D.	1318 Stone St.	Pt. Huron, Mich.
2475	2 Burke, Edw. C.	2078 10th St.	Pt. Huron, Mich.
2476	2 Biddleson, Frank	421-15th St.	Port Huron, Mich.
973	3 Brion, Jas. W.	811 Perry Payne Bldg.	Cleveland, O.
1427	3 Bough, Chas.	121 W. Schuyler St.	Oswego, N. Y.
1605	3 Bright, Wm. T.	2707 N. Whipple St.	Chicago, Ill.
1910	3 Berenstein, Jacob	1010 Robinson St.	Manistee, Mich.
2400	3 Brookhyser, Geo.	510 Arlington St.	Chicago, Ill.
2593	3 Berg, Isaac J.	10535 Ave. H.	So. Chicago, Ill.
234	4 Benham, C. E.	505 Commercial Bk. Bldg.	Cleveland, O.
698	4 Bell, Geo. A.		Vermilion, O.
982	4 Benham, Wm. P.	Rockefeller Bldg., care Hutchinson & Co.	Cleveland, O.
1068	4 Bouille, David	3304 Marvin Ave.	Cleveland, O.
1177	4 Burr, James		West Salem, O.
1236	4 Bouille, Pierce	3304 Marvin Ave.	Cleveland, O.
1384	4 Bartell, Arthur E.	1875 Burling St.	Chicago, Ill.
1423	4 Banker, Geo. H.	1557 E. 118th St.	Lakewood, Ohio.
1454	4 Bailey, F. A.	11834 Clifton Blvd.	Lakewood, Ohio.
1499	4 Benham, Geo. E.	1442 Rosewood Ave.	Lakewood, O.
1542	4 Buchanan, James	1220 Virginia Ave.	Lakewood, Ohio.
1577	4 Burt, Geo. G.	1315 East Blvd.	Cleveland, Ohio.
1714	4 Birmingham, J.		Geneva, O.
2509	4 Bourgeois, Edw. M.	1360 W. 114th St.	Cleveland, O.
2974	4 Bostwick, M. E.	3315 W. 100th St.	Cleveland, Ohio.
1589	4 Burns, T. C.	1486 W. 116th St.	Cleveland, O.
505	6 Boyce, H. M.	631 Superior St.	Milwaukee, Wis.
1525	6 Bennett, J. G.		Bailey Harbor, Wis.

Pen. nant Lodge	Name	Address	City
1691 6	Brownell, J. A.	935 Allis St.	Milwaukee, Wis.
2227 6	Behm, Paul	703 Ludington Ave.....	Ludington, Mich.
2530 6	Bolhouse, George..	515 5th Ave.	Milwaukee, Wis.
1117 7	Burke, Enos J.	415 Wabash Ave.....	Detroit, Mich.
1193 7	Bertrand, Frank ...	1176 15th St.	Detroit, Mich.
1137 7	Balfour, C. C.	201 Blain Ave.	Detroit, Mich.
2972 4	Buckley, H. L.	418 Eddy St.	Cleveland, Ohio.
2983 4	Brown, Milton J. ..	9411 Detroit St.	Cleveland, Ohio.
1356 7	Baker, H. W.	884 Lathrop Ave., care Mrs. W. Schaefer	Detroit, Mich.
1397 7	Baker, Burton S...	328 VanDyke Ave.....	Detroit, Mich.
1592 7	Bain, A. J.	111 Pelissier St.....	Windsor, Ont.
1673 7	Brown, Claud D. ..E.	Main St.	Geneva, O.
1827 7	Burns, Geo. C.	298 Field Ave.	Detroit, Mich.
1830 7	Byers, Clarke J. ..	124 Canfield Ave., W.....	Detroit, Mich.
1198 8	Brown, Hector ...	261 N. Main St.	Marine City, Mich.
1715 8	Booth, W. H. ...	1017 Pearl St.	Pt. Huron, Mich.
1903 8	Beall, A. R.	12619 Detroit Ave.....	Cleveland, O.
1960 8	Baird, Jno. D.	605 Main St.	Marine City, Mich.
2078 8	Burrows, A. W. ....	.....	Marine City, Mich.
2443 8	Baird, Leonard M...	330 Woodworth St...	Marine City, Mich.
2444 8	Booth, Herman ...	413 Jefferson St.....	Marine City, Mich.
1126 9	Benson, Dan, .....	.....	Prairie Depot, O.
2498 10	Bryan, Wm. T. G. ..	15 Mills St.	Ogdensburg, N. Y.
2034 12	Brower, Harry F...	Box 829	Two Harbors, Minn.
2335 12	Bourassa, Albert ...	1924 Minnesota Ave.,	Duluth, Minn.
1531 14	Brown, Nelson ...	R. F. D. No. 4	St. Clair, Mich.
2106 14	Burk, Joseph C. ..	206-4th St.	St. Clair, Mich.
2107 14	Brines, Jesse M...	553 N. Riverside Ave....	St. Clair, Mich.
2150 14	Brines, Samuel ...	336 W. Philadelphia St. ..	Detroit, Mich.
2493	Bayliss, F. C.	321 North St.	Halifax, N. S.
2450	Buchanan, Jno. ...	P. E. County	Waupoos, Ont., Can.
50 1	Corcoran, Joseph ..	221 E. 3rd St.	Erie, Pa.
116 1	Coleman, J. H.	41 Rodney Ave.	Buffalo, N. Y.
827 1	Cunningham, Jas...	59 Ardmore Place.....	Buffalo, N. Y.
1393 1	Clarke, John C. ..	387 Breckenridge St.	Buffalo, N. Y.
1508 1	Clarke, W. E.	39 Michigan Ave.	Buffalo, N. Y.
1717 1	Crawford, Geo. B...	205 Voorhees Ave.....	Buffalo, N. Y.
1844 1	Clarke, Jas. M. ...	575 Tonawanda St.....	Buffalo, N. Y.
1845 1	Chilson, W. E.	182 Ohio St.	Buffalo, N. Y.
2055 1	Coughlin, Michael...	179 O'Connell Ave.....	Buffalo, N. Y.
2171 1	Campbell, Chas. ..	91 Meriden St.	Buffalo, N. Y.

Pen. nant Lodge	Name	Address	City
2397 1	Carr, James	219 Pennsylvania St.	Buffalo, N. Y.
861 2	Chamber, Alf. P.	829 Prospect Ave.	Pt. Huron, Mich.
1012 2	Cowles, Wm. J.		North St., Mich.
1241 2	Canartney, M.	715 Franklin Ave.	Bay City, Mich.
1495 2	Cassin, James	1334 Lepeer Ave.	Pt. Huron, Mich.
1609 2	Carlisle, Theo. J.	1018 Poplar St.	Pt. Huron, Mich.
1664 2	Crooker, David M.	2608 Gratiot Ave.	Pt. Huron, Mich.
1730 2	Crockett, Tyler J.	Federal & Commercial Bk. Bldg.	
			Pt. Huron, Mich.
1731 2	Comins, Alonzo B.	922 Willow St.	Pt. Huron, Mich.
2476 2	Crawford, R. M.	1809 6th St.	Pt. Huron, Mich.
2507 2	Currie, Carlos C.	420 Raspberry St.	Erie, Pa.
2508 2	Currie, Alfred L.	420 Raspberry St.	Erie, Pa.
2966 2	Cornell Hart R.		Romeo, Mich.
149 3	Carr, James	2654 Florence Ave.	Chicago, Ill.
370 3	Clow, J. M.	619 Michigan Ave.	Menominee, Mich.
642 3	Cochrane, D. M.	3530 Ellis Ave.	Chicago, Ill.
1172 3	Christopher, S.	1928 N. Richmond St.	Chicago, Ill.
1308 3	Campau, Louis A.	7515 Eggleston Ave.	Chicago, Ill.
1445 3	Cullnan, Jno.	1909 Newport Ave.	Chicago, Ill.
2388 3	Cummings, G. M.	94 Batavia St.	River Rouge, Mich.
2418 3	Cullnan, Pat. J.	1909 Newport Ave.	Chicago, Ill.
44 4	Chapman, A. C.	1482 Ridgewood Ave.	Lakewood, O.
274 4	Collier, W. A.	8010 Hough Ave.	Cleveland, O.
290 4	Call, Richard	3 Fiske St.	Ashtabula, O.
433 4	Cleveland, C. R.	3500 Denison Ave.	Cleveland, O.
738 4	Cottrell, Geo. L.	1611 Mars Ave.	Lakewood, O.
914 4	Carlross, W. S.		Ashtabula Harbor, O.
1070 4	Cody, F. B.	Care J. W. Petch	Walkerville, Ont.
1135 4	Craigie, Alex.	7405 Detroit Ave.	Cleveland, O.
1438 4	Colbert, Thomas	1440 E. 89th St.	Cleveland, O.
1523 4	Culp, Hamilton	33 Centre St.	Willoughby, O.
1563 4	Conkey, Chas. M.	8010 Luella Ave.	Chicago, Ill.
1954 4	Cowie, Andrew	1230 Bonnie View Ave.	Lakewood, O.
2064 4	Clegg, Harry J.	1224 Hall Ave.	Lakewood, O.
2159 4	Collins, Allen	1528 Northland Ave.	Lakewood, O.
2369 4	Christiansen, C.O.S.	6708 Fir Ave.	Cleveland, O.
3483 4	Carsten, Charles	5510 Franklin Ave.	Cleveland, O.
2523 4	Colson, Frank O.	38 Williams St.	Ashtabula Harbor, O.
2531 4	Crerar, John	2226 E. 84th St.	Cleveland, O.
2954 4	Cooney, Edward J.	539 E. 9th St.	Erie, Pa.
2973 4	Carlisle, Colin C.	1554 Orchard Grove	Cleveland, O.

Pen. nant Lodge	Name	Address	City
439 6	Carter, W. J.	1500 Humboldt St.	Milwaukee, Wis.
1125 6	Christiansen, A.	753 Farrell Ave.	Milwaukee, Wis.
1696 6	Clausson, G. T.	1417 Atkins St.	Erie, Pa.
1819 6	Carus, Edward	1209 Franklin St.	Manitowoc, Wis.
1861 6	Cavanaugh, J. F.	309 2nd St.	Grand Haven, Mich.
1908 6	Cartwright, Peter	560 5th Ave.	Milwaukee, Wis.
2102 6	Cook, Jacob F.	654 Reed St.	Milwaukee, Wis.
1076 7	Crosby, Wm. J.	379 Cavalry Ave.	Detroit, Mich.
1085 7	Clarke, A. A.	4204 Parrish Ave.	Indiana Harbor, Ind.
1244 7	Clifford, Alex.	878 Fort St. E.	Detroit, Mich.
1355 7	Christie, Chas.	541 Clinton Ave.	Detroit, Mich.
1374 7	Callam, A. C.		Amherstburg Ont., Can.
1447 7	Craig, J. C.	134 Tyler Ave.	Highland Park, Mich.
1961 7	Cannally, Jas. T.	68 Chope Place	Detroit, Mich.
2520 7	Cain, Richard A.	3467 Fisher Ave.	Detroit, Mich.
3001 7	Cram, Edward	351 Epworth Blvd.	Detroit, Mich.
3002 7	Conlon, J. M.	999 Hudson Ave.	Detroit, Mich.
1257 8	Cottrell, J. E.	Elizabeth St.	Marine City, Mich.
1252 9	Cunningham, J. J.	1727 Ontario St.	Toledo, O.
1977 9	Cornwall, A. W.	Great Lakes Towing Co.	Toledo, O.
1890 10	Casey, Henry	118 Elizabeth St.	Ogdensburg, N. Y.
2071 11	Campbell, R.	Box 173	Algonac, Mich.
2193 11	Cole, Fred S.		Algonac, Mich.
1949 14	Conlin, Thos.	Cass & Third St.	St. Clair, Mich.
2103 14	Campbell, Robert	Caynga Ranch	Marmora, Ont.
2505 14	Cahours, H. J.	603 N. 5th St.	St. Clair, Mich.
2958 14	Cushing, Jas. C.	871 Virginia Park	Detroit, Mich.
17 1	Dunn, John	387 LeMay St.	Detroit, Mich.
317 1	Drake, A. B.	812 Prudential Bldg.	Buffalo, N. Y.
1519 1	Dunn, Thomas	594 Parkside Ave.	Buffalo, N. Y.
1670 1	Drury, John E.	256 Plymouth Ave.	Buffalo, N. Y.
1719 1	Donahue, Joseph	72 Mont Clair St.	Buffalo, N. Y.
2172 1	DeLaney, Wm. F.	775 Front Ave.	Buffalo, N. Y.
1668 2	Ditzel, Henry E.	3007 Michigan Ave.	Duluth, Minn.
2518 2	Davis, Calvin H.	703 Ontario St.	Port Huron, Mich.
105 3	Durker, Henry	4901 W. VanBuren St.	Chicago, Ill.
199 3	Disher, Wm.	4838 Fulton St.	Chicago, Ill.
983 4	Detliffs, Emil	3788 W. 33rd St.	Cleveland, O.
1059 4	Driscoll, James H.	1455 Northland Ave.	Lakewood, O.
1127 4	Dyble, Edward	1669 Marlowe Ave.	Lakewood, O.
1492 4	Dixon, Alfred	4205 Brooklyn Ave.	Cleveland, O.
1803 4	Durney, John	4509 Clinton Ave.	Cleveland, O.

Pen.		Name	Address	City
2002	4	Dunn, P. H.	4317 Leading Ave.	Cleveland, O.
2058	4	Dodge, Wm. J.	1583 Northland Ave.....	Lakewood, O.
2141	4	Dunn, Wm. R.	3843 W. 44th St.	Cleveland, O.
2151	4	Doner, Geo. R. ...	11515 Hopkins Ave.	E. Cleveland, O.
2254	4	Durkee, W. W.	49 Hammersmith Ave.....	Toronto, Can.
2282	4	DeLand, Waldo A..	1349 Nicholson Ave.....	Lakewood, O.
2463	4	Davenport, Frank.	6102 Detroit Ave.....	Cleveland, O.
2961	4	Duddleson, J. M. ..	1229 Ramona Ave.	Lakewood, O.
2978	4	Dixon, Walter J. ..	219 W. Natl. Blk. Bldg....	Mitchell, S. D.
2988	4	Downs, Chas. E. ..	1208 Bender Ave. E.	Cleveland, O.
501	6	Doake, J. A.	599 Wentworth Ave.....	Milwaukee, Wis.
1360	6	Dailey, Michael ..	252 Brady St.	Milwaukee, Wis.
1095	6	Duddleson, J. W. ...	110 Bingham Ave.	Soo, Mich.
1539	6	Dority, F. A.	540 Lake Drive	Milwaukee, Wis.
1566	6	Du Cias, Napoleon ..	935 Newhall St.....	Milwaukee, Wis.
532	7	Duncanson, D. J. ...	320 Tuxedo Ave.	Highland Pk., Mich.
1075	7	Donaghue, E. J. ...	520 14th St.	Detroit, Mich.
1683	7	Dorry, B. B.	Supt. Lighthouse	Philadelphia, Pa.
1787	7	DeNike, Lee C. ...	147 Highland Ave.....	Highland Park, Mich.
2115	7	Davie, D. W.	Old Custom House.....	Detroit, Mich.
2538	7	Duncan, V. W.	188 Humboldt St.	Detroit, Mich.
1534	8	Duplue, F. A.	335 Washington St....	Marine City, Mich.
1147	9	DeVille, D. F.	Box 348, Central Station....	Toledo, O.
1467	9	Dunseith, Jno.	206 Chamber of Com.....	Toledo, O.
2240	9	Dagon, Denis	354 Wabash St.	Toledo, O.
1739	10	Dunn, C. A.	1287 Warren Ave.	Detroit, Mich.
1891	10	Delaney, Geo. J....	353 E. 6th St.	Erie, Pa.
2003	10	Dessert, W. G.	16 Clark St.	Ogdensburg, N. Y.
2032	12	Doherty, John E. ..	122 Ellis Ave., N.....	Ashland, Wis.
2251	12	Dyrness, Ole	17 Battery St.	N. Y., New York.
2334	12	Ditzel, Edward J....	827 E. 5th St.	Duluth, Minn.
2947	12	Davis, F. W.	863 W. 7th St.	Superior, Wis.
2989	12	DesJardins, F.	321 W. 7th St.	Superior, Wis.
1672	14	Doner, James	1809 N. 6th St.	Sheboygan, Wis.
1766	14	Doner, Thos. F. ...	184 Euclid Ave. W.....	Detroit, Mich.
2007	1	Earnest, Frank H..	35 Boyd St.	Buffalo, N. Y.
2495	2	Edwards, J. A.	Box 325	Richmond, Mich.
899	3	Elliott, A. M.	2465 E. 4th St.	Long Beach, Calif.
1363	3	Elliott, Frank	care Nipigon Trans. Co.	Port Huron, Mich.
1425	3	Edwards, M. L. ...	2758 Osgood St.	Chicago, Ill.
1536	3	Evans, Robert T...		
1975	3	Eger, W. W.	224 N. Elmwood Ave.	Oak Park, Ill.

Pen. nant Lodge	Name	Address	City
2154	3 Emerson, S. K. ...	2304 N. Spaulding Ave.	Chicago, Ill.
2331	3 Emigh, Herbert W.		Lexington, Mich.
952	4 Eldredge, H. C. ...	3405 West Blvd.	Cleveland, O.
1219	4 England, R. W. ...	1520 Waterbury Road....	Lakewood, O.
1483	4 Ellis, Frank S.	1348 E. 111th St.	Cleveland, O.
1885	6 Evanson, Arnold ...	784 Murray Ave.	Milwaukee, Wis.
1828	7 Ernest, C. W.	921 Trumbull Ave.....	Detroit, Mich.
2080	7 Ellis, Claud A.		Douglas, Mich.
2501	7 Emig, Edward ...	681 Sheridan Ave.....	Detroit, Mich.
2526	8 Emig, Arthur R. ...	406 West Blvd.	Marine City, Mich.
2986	8 Endleman, John G. ...	635 N. Main St.	Marine City, Mich.
1494	12 Ehrhardt, J. W. ...	2007 E. 2nd St.	Duluth, Minn.
2194	12 Ege, Gustaf ...	617-22nd Ave.	Duluth, Minn.
2374	12 Ege, Louis ...	928 43rd Ave., E.	Duluth, Minn.
2992	12 Everson, Harry ...	1420 Fisher Ave.	Superior, Wis.
1464	1 Finnegan, O. P. ...	31 Gelston St.	Buffalo, N. Y.
2940	1 Fountain, W. C. ...	28 Bloomfield Ave.	Buffalo, N. Y.
1629	2 Fowler, Thomas ...	553 12th St. W.....	Detroit, Mich.
1951	2 Foster, John ...	323 Hubbard Ave.	Detroit, Mich.
2022	2 Frilay, H. W.	2418 Military St.	Port Huron, Mich.
1457	3 Fitch, Edward ...	609 S. Park Ave.....	Oak Park, Ill.
1974	3 Fischer, Robert ...	3434 Walnut St.	Chicago, Ill.
2340	3 Ferguson, J. J. ...	3113 Wilson Ave.	Chicago, Ill.
2472	3 Fleming, James H. ...	609 E. 50th Place	Chicago, Ill.
247	4 Flick, Frank A.	1768 Noble Rd. E.	Cleveland, O.
971	4 Fleck, James A. ...	296 Hogarth Ave.	Detroit, Mich.
1026	4 Fox, Benson ...	1634 E. 86th St.....	Cleveland, O.
1041	4 Ferguson, Wm. ...	1433 Robinwood Ave....	Lakewood, O.
1361	4 Faragher, Wm. ...	1366 Edward St.	Lakewood, O.
1386	4 Ferguson, John A.		Bayfield, Ont., Can.
1446	4 Fitch, Edward ...	1430 Springard Ave.	Lakewood, O.
1679	4 Fowlie, Andrew ...		Goderich Ont., Can.
2262	4 Francis, L. J.	1655 Clarence Ave.	Lakewood, O.
2503	4 Frankforther, R. O. R. F. D. No. 7.		Defiance, O.
2975	4 Fick, John E.	1754 E. 27th St.	Cleveland, O.
1970	6 Franklin, W. E. ...	1005 State St.	Traverse City, Mich.
2235	6 Fowler, C. C.		Montague, Mich.
612	7 Fox, A. J.	Foot of First St.....	Detroit, Mich.
629	7 Ferguson, R. E. ...	22 Elm Ave.	Windsor, Ont., Can.
1417	7 Forbes, Alex.	71 Hazelwood Ave.....	Detroit, Mich.
1465	7 Flaherty, Jas.	Detroit River Station....	Detroit, Mich.
1815	7 Fox, Chas.	Str. Marquette	Detroit, Mich.

Pen. nant Lodge	Name	Address	City
2030 12	Fox, Henry	General Delivery	Two Harbors, Minn.
2266	Ferguson, W. J.	209 S. Marks St.	Ft. William, Ont.
2069 12	Finnegan, Herbert	105 N. 5th St.	St. Clair, Mich.
120 1	Graser, George	Nueva Gerona	Isle of Pines, Cuba
1016 1	Green, John D.	955 West Ave.	Buffalo, N. Y.
1060 1	Gibson, Jas. R.	692 Prospect Ave.	Buffalo, N. Y.
1314 1	Grant, C. J.	1239 Lakeland Ave.	Lakewood, O.
1633 1	Gebbard, Frank R.	1308 Michigan St.	Buffalo, N. Y.
1723 1	Gibson, James	394 Jersey Ave.	Buffalo, N. Y.
2049 1	Green, Joseph M.	529 Woodlawn Ave.	Buffalo, N. Y.
1684 2	Geel, Guy G.	Commercial Bank	Port Huron, Mich.
986 3	Gallino, A. P.	404 Jay St.	St. Clair, Mich.
1568 3	Green, Arnold	3231 Potomac Ave.	Chicago, Ill.
2532 3	Gustafson, C. A.	1519 E. 76th Place	Chicago, Ill.
2964 3	Gentz, Otto A.	7518 Clyde Ave.	Chicago, Ill.
1403 4	Goodwin, Jas. F.	1302 W. 103rd St.	Cleveland, O.
1493 4	Gould, Frank E.	15212 Lake Shore Blvd.	Cleveland, O.
1588 4	Grashaw, Walter	11317 Quincy Ave.	Cleveland, O.
1595 4	Girardin, W. L.	1211 Bonnie View Ave.	Lakewood, O.
1596 4	Gustafson, Peter	2237 Carnegie Ave.	Cleveland, O.
2117 4	Glen, Alex	2284 E. 100th St.	Cleveland, O.
2371 4	Gardner, Chas. B.	609 Shelby St.	Sandusky, O.
2524 4	Goff, Edward	3818 Lorain Ave.	Cleveland, O.
1552 6	Garrity, Thos.	935 Newhall St.	Milwaukee, Wis.
2122 6	Grimm, Otto C.	555 7th Ave.	Milwaukee, Wis.
2977 6	Garland, Guy N.	1318 First St.	Milwaukee, Wis.
3000 6	Griffith, T. R.	488 Greenbush St.	Milwaukee, Wis.
1054 7	Goodrow, Frank	475 Cadillac Ave.	Detroit, Mich.
1526 7	Gordon, D. G.	504 Chamber of Commerce	Detroit, Mich.
1585 7	Gatfield, E. D.		Grose Isle, Mich.
1920 7	Gleason, J. F.	843 Lathrop Ave.	Detroit, Mich.
2949 7	Grose, Otto M.	492 Piper Blvd.	Detroit, Mich.
2950 7	Grose, Edward W.	399½ Piper Blvd.	Detroit, Mich.
1911 10	Gamashe, Fred	36 Patterson St.	Ogdensburg, N. Y.
2399 10	Gooden, Frank	112 King St.	Ogdensburg, N. Y.
1771 11	Galton, F. D.		Algonac, Mich.
1779 11	Grant, Theodore	Box 78	Algonac, Mich.
2025 12	Glockle, M. B.	5915 Hough Ave.	Cleveland, O.
2037 12	Glenn, Martin E.	5713 Olney St.	Duluth, Minn.
2042 12	Green, Chas. H.	1515 E. 4th St.	Duluth, Minn.
2221 12	Gunderson, G.	1829 London Road	Soo, Mich.
1150 14	Greening, Wm.	1139 Pringree St.	Detroit, Mich.

Pen. nant Lodge	Name	Address	City
2515	Guy, John	36 S. Clifton St.	Halifax, N. S.
22 1	Hogg, G. L.	7710 Emerald Ave.	Chicago, Ill.
1029 1	Herbert, Fred	Care Light House Inspector	Buffalo, N. Y.
1091 1	Howe, Alfred B.	753 So. Main St.	Dayton, O.
1140 1	Hansen, A. C.	2528 Main St.	Buffalo, N. Y.
1187 1	Hartman, John I.	41 Lafayette Ave.	Buffalo, N. Y.
1497 1	Herbert, Jas. G.	Erie Co., R. F. D. No. 1.	Hamburg, N. Y.
1728 1	Heffernan, Jas.	68 Seymour St.	Tonawanda, N. Y.
1754 1	Hanley, C. C.	371 Falconer St.	No. Tonawanda, N. Y.
1756 1	Holmberg, Henry	229 Lafayette Ave.	Buffalo, N. Y.
1759 1	Hayes, W. J.	243 Broad St.	Tonawanda, N. Y.
1760 1	Heffernan, Thos.	39 Grove St.	Tonawanda, N. Y.
2082 1	Hutchins, H. J.	93 Elk St.	Buffalo, N. Y.
2242 1	Healy, James J.	47 Roanoke Pkwy.	Buffalo, N. Y.
2971 1	Healy, George	142 Echra Place	Buffalo, N. Y.
388	Harrow, W. B.	301 Putnam Ave.	Detroit, Mich.
641 2	Harper, George	1509 Marquette Ave.	W. Bay City, Mich.
1555 2	Hughes, Henry S.	10 Mohawk St.	Albany, N. Y.
2404 2	Hayes, Jno. E.	202 Glenwood Ave.	Port Huron, Mich.
1359 3	Higgle, John F.	136 S. Waller Ave.	Chicago, Ill.
1699 3	Hansen, Andrew	4245 Lemoyne St.	Chicago, Ill.
2004 3	Hansen, Hans	2526 No. Avers Ave.	Chicago, Ill.
362 3	Higgins, Thos. J.	302 N. Lockwood Ave.	Chicago, Ill.
2381 3	Hillstrand, H.	1653 N. Tripp Ave.	Chicago, Ill.
2470 3	Hougneland, L.	2726 Channay St.	Chicago, Ill.
2537 3	Horton, Chas. E.	2648 No. Halsted St.	Chicago, Ill.
2539 3	Hansen, Hans A.	3939 N. Troy Ave.	Chicago, Ill.
160 4	Hoover, N. E.	9715 Madison Ave.	N. W. Cleveland, O.
2105 4	Hartman, A.	921 E. 105th St.	Cleveland, Ohio.
391 4	Hinslea, Chas. H.	2836 Franklin Ave.	Cleveland, O.
269 4	Holmes, J. A.	2929 Edghill Ave.	Cleveland, O.
506 4	Hawgood, A. H.	1862 E. 97th St.	Cleveland, O.
1004 4	Hoag, Wm. S.	7505 Franklin Ave.	Cleveland, O.
1017 4	Hunt, Wm. J.	1528 Lauderdale Ave.	Lakewood, O.
1106 4	Heaton, Chas. H.	1337 W. 112th St.	Cleveland, O.
1136 4	Hengenrother, J.	3266 W. 82nd St.	Cleveland, O.
1184 4	Hinslea, Henry	2836 Franklin Ave.	Cleveland, O.
1197 4	Hand, A. S.	533 Harbor St.	Conneaut, O.
1204 4	Hahn, Chas. P.		Vermillion, O.
1553 4	Holdridge, Geo.	R. F. D. No. 3, Box 17	Geneva, O.
2116 4	Hughes, Jos. H.	13508 Woodworth Rd.	Cleveland, O.

Pen. nant Lodge	Name	Address	City
2447 4	Hibbard, Grant C...	13611 Milan Ave.	E. Cleveland, O.
2969 4	Hinslea, Lee C.	1743 Bryn Mawr Rd.	Cleveland, O.
572 6	Hubbard, Chas. H.	care Sup't Lighthouses	Milwaukee, Wis.
1527 6	Hendricksen, Otto.	Milwaukee Tug Boat Line	Milwaukee, Wis.
1878 6	Hoxie, A. L.	511 N. Charles St....	Ludington, Mich.
1884 6	Hays, Jno. C.	149 W. 26th St.	Erie, Pa.
2999 6	Hoglund, R. C.	320 Mont Clair Ave.	Detroit, Mich.
528 7	Hutton, Jno. T.	69 McLean Ave.	Detroit, Mich.
666 7	Holbrook, F. H.	Box 153	Trenton, Mich.
987 7	Hutchins, F. G.....	South Rockwood, Mich.	
1547 7	Hosner, V. L.	755 Canton Ave.	Detroit, Mich.
1612 7	Hansen, J. T.	850 Stanley Ave.	Detroit, Mich.
1707 7	Hormig, W. F.	53 Seeboldt Ave.	Detroit, Mich.
1786 7	Hackett, Thos. H.	425 4th Ave.	Detroit, Mich.
1832 7	Honner, G. W.	471 Delaware Ave.....	Detroit, Mich.
1834 7	Hayward, Geo.	53 Whiting Ave.	Detroit, Mich.
1851 7	Huntoon, Fred A.	255 Forrest Ave.	W. Detroit, Mich.
1881 7	Hoffman, Frank ..	416 Ferry Park Ave.....	Detroit, Mich.
2517 7	Hyatt, Jno. H.	908 Warren Ave.	W. Detroit, Mich.
786 8	Hogan, William ..	336 Union St.....	Marine City, Mich.
1421 8	Hill, Fred C.	Marine City, Mich.	
553 9	Harlow, Wm. J.	1430 Broadway	Toledo, O.
826 9	Herrick, Thos. C. ..	3368 Cherry St.	Toledo, O.
1304 9	Harlow, Frank T.	1577 W. 29th St.	Cleveland, O.
1946 9	Holman, Henry	2112 Chase St.	Toledo, O.
2430 11	Haydt, Wm. F.	Box 353	Algonac, Mich.
2041 12	Hoy, W. E.	5001 E. Superior St.	Duluth, Minn.
2085 12	Hansen, Hans. C.	3819 W. 4th St.	Duluth, Minn.
2252 12	Hector, Fred.	4301 Cook St.	Duluth, Minn.
2461 12	Hansen, L. P.	care V. Salling, Bx. 113..	Grayling, Mich.
1820 14	Hollingshead, Jno.	892 32nd St.	Oakland, Calif.
1924 14	Hayward, Eugene ..	R. F. D. No. 2.....	St. Clair, Mich.
2105 14	Hartman, A.	921 E. 105th St.	Cleveland, O.
2413	Housberger, Wm.	Box 564	Thorold, Ont., Can.
1035 4	Ingraham, F. E.	221 S. 5th St.	Alhambra, Calif.
15 7	Ivers, J. H.	705 Cadillac Ave.	Detroit, Mich.
1443 7	Iler, W. C.	487 Lakewood Blvd.....	Detroit, Mich.
394 1	Johnson, John	38 Baynes St.	Buffalo, N. Y.
1976 1	Johnson, Alfred ..	205 Lafayette Ave.	Buffalo, N. Y.
2014 1	Jansen, Jacob C.	25 Mesmer Ave.	Buffalo, N. Y.
1014 2	Johnston, Edw.	Aylmer, Ont., Can.	

Pen. nant Lodge	Name	Address	City
1767 2	Johnston, Martin	2120 8th St.	Port Huron, Mich.
2241 2	Jamieson, A. W.	1115 Elmwood St.	Port Huron, Mich.
1603 3	Johnson, Carl	2600 N. Sawyer Ave.	Chicago, Ill.
1909 3	Jaenke, H. M.	10420 Ave. N.	South Chicago, Ill.
2061 3	Johnson, Geo. E.	512 5th Ave.	Traverse City, Mich.
1115 4	Jones, John F.	5806 Clinton Ave.	Cleveland, O.
1394 4	Johnson, Martin	10122 Olivet Ave., N. E.	Cleveland, O.
2291 4	Johnson, R. E.	9916 St. Clair Ave.	Cleveland, O.
2456 4	Jensen, Jen. P.	244 Rug Ave.	Conneaut, O.
2976 4	Jones, Ralph E.	56-102nd St.	Cleveland, O.
1532 6	Jones, Warren	Milwaukee Tug Boat Line	Milwaukee, Wis.
2212 6	Johnson, Oscar A.		Courtwright, Ont., Can.
2946 6	Jackson, E. G.	635 26th Ave.	Milwaukee, Wis.
1081 7	Johnston, Alex.	1009 9th St.	Bay City, Mich.
1852 7	Jagenow, Wm.	922 Mt. Elliott Ave.	Detroit, Mich.
1797 7	Judson, H. W.	239 Rosedale Court	Detroit, Mich.
1131 9	Jex, H. N.	1749 Summit St.	Toledo, O.
1479 11	Jackson, Richard	Box 135	Algonac, Mich.
1208 12	Jacobsen, J. E.	1007 N. Lorel Ave.	Chicago, Ill.
2024 12	Jones, Albert M.	1625 Broadway	Superior, Wis.
2044 12	Johnson, Henry	820 W. Hayward Ave.	Baltimore, Md.
2287 12	Johns, John F.	1232 W. 3rd St.	Duluth, Minn.
2149 14	Jerome, W. R.	214 Thornapple St.	St. Clair, Mich.
1388 1	Klock, Everett	Three Mile Bay	New York, N. Y.
1578 1	Kelly, Andrew	341 Bayner St.	Buffalo, N. Y.
1687 1	Koch, Robert	451 Dodge St.	Buffalo, N. Y.
2955 8	Ingles, Robert	52 Water St.	Marine City, Mich.
2395 1	Kennedy, John	44 Alsace Ave.	Buffalo, N. Y.
2968 1	Keeley, Jno. W.	care Str. Maitland No. 1	Ashtabula H., O.
89 2	Kendall, H. J.	Box 32	Marysville, Mich.
1240 2	Kelly, James W.	2021 7th St.	Port Huron, Mich.
1661 2	Knapp, R. H.		Stuart, Florida.
1998 2	Krenkel, Chas. F.	2035 8th St.	Port Huron, Mich.
1437 3	Kohnert, J. E.	6443 Kenwood Ave.	Chicago, Ill.
1442 4	Keller, Alva B.	15333 Euclid Ave.	Cleveland, O.
1237 4	Kelley, Henry T.	1068 E. 99th St.	Cleveland, O.
2534 4	Kiefe, Daniel J.	2155 W. 62nd St.	Cleveland, O.
1690 6	Kearns, Chas. J.	482 35th St.	Milwaukee, Wis.
2226 6	Kruwell, W. E. H.	R. R. 1, Box No. 5	Chief, Mich.
1122 7	Kearns, Joseph	139 Oak St.	Wyandotte, Mich.
1785 7	Klingler, Geo. M.	374 Van Dyke Ave.	Detroit, Mich.

Pen.		Name	Address	City
2527	7	Kaminsky, G. W...	425 LaSalle Ave.....	Detroit, Mich.
1243	8	Kuhn, Jno.	136 N. Main St.....	Marine City, Mich.
1915	8	Kenyon, S. D.	128 Bridge St.	Marine City, Mich.
2944	8	Kiddle, A. A.	347 N. Williams St...	Marine City, Mich.
1266	9	Kirker, Fred	9424 S. Budlong Ave..	Los Angeles, Calif.
1746	10	Kinch, Geo. H. ...	85 New York Ave....	Ogdensburg, N. Y.
1772	11	Kendall, Douglas.....		Algonac, Mich.
1776	11	Kenworthy, Saml...Box 212		Algonac, Mich.
1229	14	Kenyon, W. S.	R. F. D. No. 4.....	St. Clair, Mich.
1809	1	Lucas, Wm. J.	50 Greenwood Place....	Buffalo, N. Y.
2111	1	Larsen, Jno. A. ...	83 E. Seneca St.	Buffalo, N. Y.
557	2	Laframboise, J. ...Box 307		Amherstburg, Ont., Can.
1381	3	Lamoreaux, Jos. ...6/24	Champlain Ave.....	Chicago, Ill.
1617	3	Lang, Julius	2229 Eastwood Ave.....	Chicago, Ill.
1996	3	Leith, Wm. R.	10604 Ave. L.	S. Chicago, Ill.
2005	3	Lindale, T. T.	3708 McLean Ave.	Chicago, Ill.
164	4	Lowe, James B. ...	1635 Ellar Ave.	Lakewood, O.
182	4	Lowe, John	1426 Mars Ave.	Lakewood, O.
197	4	Lyons, R. J.	1111 W. Erie St.	Lorain, O.
810	4	Lalonde, Anthony..	1766 Fulton Road	Cleveland, O.
960	4	Lampoh, Joseph		Avon Lake, O.
1010	4	LaFramboise, J....	2048 Chenngo Ave. ...	Los Angeles, Calif.
1295	4	Landfair, B. M. ...	1619 Cohasset Ave.	Lakewood, O.
1352	4	Leckie, Frederick..	1020 Rockefeller Bldg....	Cleveland, O.
1789	4	Logan, John A. ...	4008 Archwood Ave.....	Cleveland, O.
2300	4	Levis, Geo.	1329 W. 87th St.....	Cleveland, O.
2464	4	LeRoy, David M...3101	Clinton Ave.....	Cleveland, O.
500	6	Leisk, Henry	16 Kenwood Ave....	Wauwatosa, Wis.
498	6	Leisk, John	729 Wilson St.	Milwaukee, Wis.
1678	6	Lee, I. M.	1047 W. 8th St. W. ...	Los Angeles, Calif.
1765	6	Larson, N. L.	518 Bingham St.	Soo, Mich.
2211	6	Larsen, J. L.	801 Main St.	Green Bay, Wis.
2260	6	Leisk, Henry A. ...	720 Maryland Ave.....	Milwaukee, Wis.
750	7	Livingston, W., Jr..	2217 Dime Sav. Bldg..	Detroit, Mich.
1688	7	Leonard, R. M.		New Baltimore, Mich.
1901	7	Lightbody, J.	164 Holbrook Ave.....	Detroit, Mich.
2146	7	Loughlin, Geo. F...690	Hamilton Ave.	Detroit, Mich.
2195	7	Littlejohn, Wm. ...	269 W. 8th St.	Erie, Pa.
2982	7	Lane, Wm. J.	864 Hudson Ave.	Detroit, Mich.
1559	8	Lohr, Jno. M.		Marine City, Mich.
1967	8	Lovely, L. J.	569 Main St.	Marine City, Mich.
2000	8	Langell, L. P.	338 Pearl St.....	Marine City, Mich.

Pen. nant Lodge	Name	Address	City
2213 8	Langell, Thomas	R. F. D. No. 1.....	Marine City, Mich.
2336 8	Lockhart, Asa	Woodworth Ave.....	Marine City, Mich.
1079 9	Lockhart, D. O.	236 W. Grand Blvd.	Detroit, Mich.
1487 9	Lyons, J. B.	1334 6th St.	Lorain, O.
1734 10	Leonard, M. A.	416 Ford St.....	Ogdensburg, N. Y.
1800 10	Loveless, Fred.	38 Pickering St.....	Ogdensburg, N. Y.
2352 10	Lago, Thomas	155 Green St.....	Ogdensburg, N. Y.
1490 11	Lyons, S. A.	.....
1774 11	Little, Nelson T.	.....	Algonac, Mich.
2173 12	Lyons, Geo. A.	1631 W. 1st St.	Duluth, Minn.
2181 12	Lewis, Frank	.....	Dundee, Mich.
2516 12	Larson, James	722 Hammond Ave.....	Superior, Wis.
2990 12	Lenaghan, Geo. H.	1726 Ogden Ave.	Superior, Wis.
3006 12	Larson, James	R. F. D. No. 1	Zimmerman, Minn.
1835 14	Lowes, J. H.	210 Adams St.	St. Clair, Mich.
2299 14	Lawrence, Earl	.....	St. Clair, Mich.
108 1	Murphy, Henry	34 Greenwood Ave.....	Buffalo, N. Y.
129 1	Murphy, S. M.	R. F. D. No. 2	Deckerville, Mich.
891 1	Madigan, Jas. A.	296 W. Delaware St.	Buffalo, N. Y.
1047 1	Martin, Edward	308 Purdy St.	Buffalo, N. Y.
1155 1	Montgomery, J. M.	79 Greenfield St.	Buffalo, N. Y.
1562 1	Milne, John	.....	Thornburg, Ont.
1817 1	Montgomery, J. A.	417-4th St.	St. Petersburg, Fla.
1926 1	Mallory, R. A.	1217 Chamber of Com.	Buffalo, N. Y.
1995 1	Morin, Thomas F.	314 Fargo Ave.	Buffalo, N. Y.
1962 1	Myers, R. D.	915 N Lombard Ave.	Oak Park, Ill.
576 2	Maitland, Henry	1026 Wall St.....	Port Huron, Mich.
994 2	Manuel, Fred W.	3311 Military St.....	Port Huron, Mich.
1656 2	Montgomery, W. L.	750 Water St.....	Port Huron, Mich.
1836 2	Millard, Wm. L.	502 16th St.	Port Huron, Mich.
2168 2	Montgomery, G. A.	1201 Howard St.....	Port Huron, Mich.
2284 2	Myers, G. F.	343 Robinson St..	N. Tonawanda, N. Y.
2492 2	May, E. W.	1912 7th St.	Port Huron, Mich.
254 3	Moore, H. R.	6919 Wayne Ave.	Chicago, Ill.
412 3	Moore, Chas. K.	1927 Hughitt Ave., care John Mussey .	Superior, Wis.
450 3	Minsky, J. P.	2432 Geneva Terrace.....	Chicago, Ill.
1170 3	Minter, Thos. B.	1235 Otis St.	Chicago, Ill.
1695 3	Miller, Chas. F.	Dunham Towing Co..	South Chicago, Ill.
1698 3	Meyer, Gust	3826 N. Whipple St.....	Chicago, Ill.
1724 3	Morgan, M. F.	2115 Summerdale Ave.....	Chicago, Ill.
2010 3	Morrison, Dougal.	742 S. Kedzie Ave.	Chicago, Ill.

Pen. nant Lodge	Name	Address	City
2099 3	Matson, S. W.	2506 Sayre Ave.	Chicago, Ill.
2167 3	Madden, Jno. H. ..	908 Rockefeller Bldg.	Cleveland, O.
2967 3	Madden, Thos. M. .	116 W. Erie St.	Chicago, Ill.
176 4	Malory, G. B.	Care Pickands, Mather Co..	Cleveland, O.
302 4	Mallory, D. H.	National Bank of Elyria.....	Elyria, O.
339 4	Mulholland, M. ....	.....	New Plymouth, Id.
695 4	Miller, Chas. D. .	213 Lincoln Ave...N.	Tonawanda, N. Y.
959 4	Moody, W. H. ....	.....	Vermillion, O.
988 4	Megervery, Wm. ....	.....	Warren, O.
1238 4	Murdock, John A. ....	.....	Saxon, Wis.
1572 4	Moore, Frank	2081 W. 98th St.	Cleveland, O.
1587 4	Millikin, Wm.	14503 Orinoco Ave.	Cleveland, O.
1580 4	Meeker, S. E.	1454 Orchard Grove Ave..	Lakewood, O.
1675 4	Mooney, Wm. F. ....	.....	West Park, O.
1702 4	Moore, Wm. E.	1884 W. 54th St.	Cleveland, O.
1704 4	Mason, Chas. D. ..	1100 Rockefeller Bldg....	Cleveland, O.
1713 4	Morton, Edw. R. .	12323 Saynell Ave.	Cleveland, O.
1821 4	Moore, Geo. W. ...	1386 W. 91st St.....	Cleveland, O.
1973 4	Mallott, J. W.	Box 25	Ruthven, Ont., Can.
2199 4	Morrison, Wm. F..	1641 Waterbury Rd.	Lakewood, O.
2391 4	Martin, Peter J. .	5704 Longfellow Ave.....	Cleveland, O.
2466 4	Mohr, Chas. H. ...	1510 Contaut St.	Lakewood, O.
2942 4	Munroe, A. J.	1884 W. 71st St.	Cleveland, O.
2979 4	Moran, Jos. S.	2088 W. 89th St.	Cleveland, O.
2996 4	Morton, A. C.	11507 Fairport Ave.	Cleveland, O.
3007 4	Meyers, Chas. F. ..	6 Walnut St.	Ashtabula, O.
477 6	Maxon, F. C.	83 31st St.	Milwaukee, Wis.
1032 6	Moody, Chas. E. .	92 33rd St.	Milwaukee, Wis.
1763 6	Mackey, Melvin ...	402 Edgewood Ave.....	Milwaukee, Wis.
2124 6	Mellan, Gurenuls..	care Str. L. R. Davidson.	Manitowoc, Wis.
2417 6	Maynard, H. W. ...	care Supt. Lighthouse Insp..	Milwaukee
732 7	Mara, James	465 Military St	Detroit, Mich.
1073 7	Mahon, A. J.	1243 Euclid Ave.	Detroit, Mich.
1082 7	Mallette, P. A.	1035 Hurlburt Ave.....	Detroit, Mich.
1175 7	Millen, P. L. ....	.....	Romeo, Mich.
1194 7	Maddock, J. B....	3719 Hoiles Ave.	Toledo, O.
1203 7	Maddock, J. C.	3719 Hoiles Ave.	Toledo, O.
1582 7	Merckel, C. G.	122 Stanton Ave.	Detroit, Mich.
1694 7	Morrison, J. N. ...	32 Calvert Ave.	Detroit, Mich.
2144 7	Morrison, Alvin A.	2816 Logan Blvd.	Chicago, Ill.
1276 8	Maxwell, Wm.	214 N. Elizabeth St...	Marine City, Mich.
1402 8	Markle, S. J.	54 Euclid Ave.	Detroit, Mich.

Pen. nant Lodge	Name	Address	City
1904 8	Mitchell, D. R.	225 N. Market St....	Marine City, Mich.
613 9	Meikleham, Thos....	641 Fernwood Ave.	Toledo, O.
1736 10	Murphy, H. A.	119 Caroline St.....	Ogdensburg, N. Y.
1778 11	Moore, S. D.		Algonac, Mich.
1781 11	Mitchell, Alvin B.....		Algonac, Mich.
2218 11	Morrison, E. R.	368 Fargo Ave.	Buffalo, N. Y.
1790 12	Massey, Chester ..	1927 Hughitt Ave.....	Superior, Wis.
2376 12	Miller, Thos. R. ...	1621 Grand Ave.	Milwaukee, Wis.
2455 12	Massey, J. Floyd ..	1927 Hughitt Ave.....	Superior, Wis.
1964 14	Morse, A. R.	107 S. 9th St.....	St. Clair, Mich.
2164 14	Mussman, A.	901 S. 7th St.	St. Clair, Mich.
2359	Marcellias, W. C. .	118 Peter St.	Port Arthur, Ont.
2454	Miller, R. McLean	502 Lundsden Bldg.	Toronto, Can.
315 1	McEachren, A.	553 W. Ave.	Buffalo, N. Y.
1652 1	McDonald, John A..	202 Main St.	Buffalo, N. Y.
1757 1	McLaren, B. C. ...	50 Greenwood Place....	Buffalo, N. Y.
1810 1	McClinton, Wm. D..	381 W. 6th St.	Superior, Wis.
1814 1	McLeod, Dugald ..	53 Ardmore Place	Buffalo, N. Y.
2016 1	McFadden, W. L. ..	306 Purdy St.	Buffalo, N. Y.
2970 1	McPherson, A. J. ..	Hampcher St.	Buffalo, N. Y.
2129 1	McCorkell, W. H. ..	16 N. Bailey Ave.	Buffalo, N. Y.
2382 1	McKenzie, Alex....	969 Niagara St.....	Buffalo, N. Y.
1504 2	McLean, J. C.	1109 St. Clair St.....	Port Huron, Mich.
1999 2	McDonald, J. E. ..	1929 Stone St.	Port Huron, Mich.
2259 2	McMartin, Frank..	459 Blain Ave.	Detroit, Mich.
300	McCambridge, T..	306 2nd St.	Grand Haven, Mich.
542 3	McDonald, Geo. ...	4411 N. Winchester Ave....	Chicago, Ill.
543 3	MacLean, Donald..	R. F. D. No. 1.....	Michigan City, Ind.
941 3	McIntyre, A. A. ...	are Capt. Morgan	Chicago, Ill.
1619 3	McQueen, W. S. ...	144 Lindwood Ave.	Detroit, Mich.
1857 3	McKenzie, K.	Box 79	Tiverton, Ont., Can.
2121 3	McClintock, John..	7724 Loomis St.	Chicago, Ill.
2244 3	McGarrity, Dan. J..	7734 Constance Ave.....	Chicago, Ill.
1069 4	McGarry, John	1657 Waterbury Rd.	Lakewood, O.
1224 4	McAlpine, Hugh ..	1794 W. 47th St.	Cleveland, O.
1415 4	MacLachlan, A. H..	1861 W. 47th St.	Cleveland, O.
1462 4	McDonald, W.	1589 Lincoln Ave.....	Lakewood, O.
1557 4	McGarry, Geo.	1658 Elbut Ave.	Lakewood, O.
2096 4	McLachlan, W. H..	1461 Marlowe Ave.	Lakewood, O.
2142 4	McNaughton, Roy..	First National Bank.....	Soo, Mich.
2161 4	McDonald, J. J. ...	1321 W. 108th St.....	Cleveland, O.
2372 4	McCarthy, Patrick.	1575 Northland Ave.....	Lakewood, O.

Pen.	Lodge	Name	Address	City
507	6	McSweeney, John	459 Magnolia Ave.	Milwaukee, Wis.
515	6	McGregor, W. F.		Porcupine, Ont., Can.
1561	6	McShane, D. W.		New Auburn, Wis.
1682	6	McCauley, C.	431 Juneau Place	Milwaukee, Wis.
1833	6	McCauley, Chas.	408 S. Morris St.	Escanaba, Mich.
2283	6	McCauley, John P.	1959 W. 52nd St.	Cleveland, O.
755	7	McLarty, James	163 Colburne Place	Detroit, Mich.
767	7	McIntosh, M. G.	5 Burlingame Ave.	Detroit, Mich.
875	7	McCallam, H. C.	2503 Military St.	Port Huron, Mich.
910	7	McLean, Wm.	1225 St. Charles St.	Lakewood, O.
972	7	McAlpine, John	263 LaMothe Ave.	Detroit, Mich.
1028	7	McLachlan, A.	56 11th St.	Detroit, Mich.
1052	7	McGuire, Norman	810 Ferry Park Ave.	Detroit, Mich.
1065	7	McIntosh, J. L.	312 Hancock Ave. W.	Detroit, Mich.
1112	7	McCarthy, D.	354 Arborway	Jamaica Plains, Mass.
1433	7	MacLean, W. J.	621 Wabash Ave.	Detroit, Mich.
1631	7	McCarthy, John	Box 11	Sandwich, Ont., Can.
1854	7	MacKay, Daniel	City of Cleveland	Detroit, Mich.
1899	7	MacAuley, Geo.	113 Byron Ave.	Detroit, Mich.
1937	7	McGowen, Hugh	rare Dr. Moss	Pontiac, Mich.
2145	7	McDougall, W. L.	259 Meadowbrook Ave.	Detroit, Mich.
	7	MacDonald, Alex	259 Meadowbrook Ave.	Detroit, Mich.
2197	7	McDonald, Fred	292 4th Ave.	Detroit, Mich.
2479	7	McCormick, J. C.	394 Phillips Ave.	Detroit, Mich.
1199	8	McCann, S. B.	221 S. Elizabeth St.	Marine City, Mich.
1616	8	McDonald, G. W.	234 N. Williams St.	Marine City, Mich.
1990	8	McNeill, W. H.	330 S. Williams St.	Marine City, Mich.
856	9	McKinley, Jas.	1717 Ontario St.	Toledo, O.
1799	10	McDonald, John	96 Green St.	Ogdensburg, N. Y.
1315	12	McGregor, Wilson	Box 536	Bowling Green, Ken.
2046	12	McDougall, T. A.	876 W. 7th St.	Superior, Wis.
2174	12	MacLeod, A. R.	737 E. 21st St.	Erie, Pa.
2278		McLeod, N. J.	93 Ontario St.	Port Arthur, Ont., Can.
2941	1	Nims, R. J.	938 Norwood Ave.	Toledo, Ohio.
1109	2	Neal, James S.	102 Park Ave.	Mt. Clemens, Mich.
1207	2	Neal, William D.	Box 21	Courtwright, Ont., Can.
2478	2	Nelson, H. J.	403 15th St.	Port Huron, Mich.
2420	3	Napier, H. N.	693 Irving St.	Portland, Oregon
2525	3	Nelson, Robert	2108 Central Park Ave.	Chicago, Ill.
1395	4	Nordahl, Arnold	2908 Carroll Ave.	Cleveland, O.
1804	4	Nelson, Olaf	3722 W. 36th St	Cleveland, O.
1865	4	Noble, John	1418 Northland Ave.	Cleveland, O.

Pen. nant Lodge	Name	Address	City
2092 4	Nelson, S.	1291 Donald Ave.	Cleveland, O.
2134 4	Neville, R. J.	1331 W. 102nd St.	Cleveland, O.
3008 4	Nunn, Arthur E. ..	1344 Irene St.	Lakewood, Ohio.
2343 6	Nortenan, L. W. ..	717-49th St.	Milwaukee, Wis.
464 7	Nicholson, D.	Foot of Woodward St. ..	Detroit, Mich.
1623 7	Norwell, Walker ..	527 Clements St.	Detroit, Mich.
1829 7	Nesbitt, Wm. K.	3297 Euclid Blvd.	Cleveland, O.
2452 7	Nielsen, John	455 Oliver St.	N. Tonawanda, N. Y.
2987 7	Needham, H. J.	328 Hecla Ave.	Detroit, Mich.
1737 10	Neslon, C. O.	R. F. D. No. 2, Box 19	Ogdensburg, N. Y.
1740 10	Neslon, A. C.	R. F. D. No. 2, Box 19	Ogdensburg, N. Y.
2491 10	Noble, Edmund O. ..	7 Grove St.	Adams, N. Y.
2351 12	Ness, Martin O. ...	3819 W. 4th St.	Duluth, Minn.
2271	Nuttall, Robert E. ..	212 St. James St.	Port Arthur, Ont.
1169 1	O'Day, Simon	729 Prospect Ave.	Buffalo, N. Y.
1179 1	O'Neill, Patrick J. ..	632 Plymouth Ave.	Buffalo, N. Y.
1726 1	O'Hagan, John ...	144 Grove St.	Tonawanda, N. Y.
1753 1	O'Hagan, Hugh ...	220 Grove St.	Tonawanda, N. Y.
2350 1	Oliver, Percy	255 Lexington St.	Buffalo, N. Y.
1444 3	Olsen, Jn. K.	424 Federal Bldg.	Milwaukee, Wis.
2473 3	Ohlka, Chas. H. ..	2108 W. 70th St.	Chicago, Ill.
1720 4	Olsen, Chas.	117 Walnut St.	Ashtabula, O.
358 4	Olsen, Olaf.	10828 Superior St. N. E. ...	Cleveland, O.
2499 4	Ott, Frank H.	7101 Franklin Ave.	Cleveland, O.
1148 6	Olson, Sam.	469 25th Ave.	Milwaukee, Wis.
1818 6	Oakley, Jas.	6551 Cottage Grove Ave.	Chicago, Ill.
1860 6	Olson, Sam.	1214 New York Ave.	Manitowoc, Wis.
1888 7	Ogden, Ben. F.	1110 Virginia Park	Detroit, Mich.
2256 7	Oman, Chas. H.	271 Young St.	Tonawanda, N. Y.
2480 12	O'Meara, John H.	Two Harbors, Minn.	
350 14	O'Connor, R.	525 N. 2nd St.	St. Clair, Mich.
1392 1	Peterson, M. S. ...	21 Butler Ave.	Buffalo, N. Y.
2188 1	Phillips, Jas. J. ...	16 Elmwood Ave.	Tonawanda, N. Y.
2471 1	Page, Geo. H.	2472 E. 74th St.	Chicago, Ill.
140 2	Powie, P. F.	1131 Howard St.	Port Huron, Mich.
1269 3	Patterson, Wm.	6308 Eberhardt Ave.	Chicago, Ill.
1858 3	Post, S. G.	Lake St. Bridge	Chicago, Ill.
2216 3	Peterson, Martin. ..	1462 Lauderdale Ave.	Lakewood, O.
694 4	Peterson, C. A. ...	624 Reece St.	Sandusky, O.
1039 4	Post, J. W. ....	.....	Sandusky, O.
1329 4	Peterson, P. A.	10614 Garfield Ave.	Cleveland, O.
1482 4	Packer, W. H.	443 W. 1st Ave.	Columbus, O.

Pen. nant Lodge	Name	Address	City
1528 4	Pringle, R. C.	1577 Wagar Ave.	Lakewood, O.
1807 4	Peru, F. D.	1613 Robinwood Ave.	Lakewood, O.
2138 4	Pringle, Walter R.	1590 Wagar Ave.	Lakewood, O.
2377 4	Pizer, Wm. J.	Schmidt Apts. Suite 5	Sandusky, O.
2459 4	Platts, Harry	2165 W. 89th St.	Cleveland, O.
2489 4	Pollock, E. H.	7503 Carnegie Ave.	Cleveland, O.
2965 4	Petersen, F. J.	1091 Leidle Ave.	Lakewood, O.
2994 4	Plaar, Mark F.	11511 Headley Ave.	Cleveland, O.
1344 6	Preston, J. R.	27 Elizabeth St.	Newark, N. J.
2052 6	Palm, Edward	1260 Island Ave.	Milwaukee, Wis.
2253 6	Petrosky, W. J.	308 W. Austin Ave.	Chicago, Ill.
2496 6	Peterson, J. A.	1307 Logan Ave.	Marinette, Wis.
1182 7	Parsons, H. H.	262 Collingwood Ave.	Detroit, Mich.
1201 7	Parsons, Jos.	426 Washington Ave.	Alpena, Mich.
1233 7	Parson, D. R.	840 E. 51 St. Blvd.	Chicago, Ill.
1524 7	Pickell, E. S.	Str. City of Erie	Cleveland, O.
1826 7	Pearson, John J.	684 E. Jefferson St.	Detroit, Mich.
1896 7	Palmer, A. J.	541 Townsend St.	Detroit, Mich.
1935 7	Peterson, A. M.	422 Seyburn Ave.	Detroit, Mich.
2088 7	Pauls, F. H.	315, Cherry St.	Detroit, Mich.
2147 7	Perroult, Albert	58 Cicotte St.	River Rouge, Mich.
2279 7	Parsons, Jos. W.	287 Elmhurst Ave.	Highland Park, Mich.
2133 8	Piotter, Chas. L.	225 2nd St.	Marine City, Mich.
2281 9	Pocock, Robert J.	3126 Glenwood Ave.	Toledo, O.
1738 10	Powers, John J.	85 Elizabeth St.	Ogdensburg, N. Y.
2165 11	Perkins, H. L.	1133-5th St.	Sandusky, O.
1667 12	Pierce, Wm. L.	4021 W. 5th St.	Duluth, Minn.
2288 12	Pinney, Jesse	123 S. Michigan Ave.	Duluth, Minn.
2995 4	Quinn, F. W.	43111 Prospect Ave.	Cleveland, O.
2398 6	Quackenbush, E.	403 McGill Bldg.	Montreal, Can.
1256 7	Quinlan, Wm.	744 14th Ave.	Detroit, Mich.
49 1	Robinson, Walter.	326 15th St.	Buffalo, N. Y.
821 1	Rowan, Murdock	Fleming, Saskatchewan	Canada
1254 2	Reed, Wm. A.	412 Main St.	Conneaut, O.
1590 2	Randall, Frank	3914 S. Military St.	Port Huron, Mich.
56 3	Root, Frank D.		Sault Ste. Marie, Mich.
1043 3	Rand, Leroy A.	511 Park Ave.	Wilmette, Ill.
1171 3	Reid, R.	Federal Bldg.	Grand Haven, Mich.
2006 3	Rinn, Wm.	1450 Cullom Ave.	Chicago, Ill.
558 4	Rae, Frank C.		Avon Park, Fla.
708 4	Rice, Frank	7208 Clinton Ave.	Cleveland, O.

Pen.		Name	Address	City
nant Lodge				
1307	4	Reid, F. H.	1540 Lewis Drive	Lakewood, O.
1522	4	Randall, A. E.	34 Walnut St.	Ashtabula, O.
1710	4	Robinson, J. W.		Sandusky, O.
1711	4	Reid, Wm. C.	2049 W. 95th St.	Cleveland, O.
1843	4	Ritchie, W. S.	1369 Edwards Ave.	Lakewood, O.
2229	4	Rydholm, Carl O.	730 High St.	Marquette, Mich.
2230	4	Rourke, John	2013 Freeman Ave.	Cleveland, O.
2239	4	Rinn, Charles	4613 Tillman Ave.	Cleveland, O.
2261	4	Rattray, G. E.	13519 Blenheim Rd.	Cleveland, O.
2341	4	Robinson, F. A.	2110 W. 93rd St.	Cleveland, O.
1635	6	Redner, Elmer E.	Care Goodrich Line	Chicago, Ill.
1936	6	Richardson, F.	454 Jefferson St.	Milwaukee, Wis.
1284	7	Rains, E. T.	Buffalo Union Furnace Co.,	
				Buffalo, N. Y.
1377	7	Robinson, S. O.	662 Lathrop Ave.	Detroit, Mich.
1434	7	Recor, Geo. F.	665 Sheridan Ave.	Detroit, Mich.
1435	7	Rattray, C. E.	540 Holsen Ave.	Detroit, Mich.
1842	7	Recor, Robert J.	658 Baldwin Ave.	Detroit, Mich.
2347	7	Reilly, Wm. S.	19 1-2 Meldrum Ave.	Detroit, Mich.
2504	7	Rolfson, J. N.	4 VanAlstyne Blvd.	Wyandotte, Mich.
2519	7	Rathburne, J. H.	R. R. No. 1	Sombra, Can.
1848	8	Recor, Edgar	315 Westminster St.	Marine City, Mich.
2956	8	Rouvel, W. P.	536 Westminster St.	Marine City, Mich.
2962	8	Rouvel, P. E.	536 Westminster St.	Marine City, Mich.
1741	10	Russell, Henry	117 Morris St.	Ogdensburg, N. Y.
2143	10	Russell, Frank P.		Millville, Maine
2339	10	Russell, Wm. R.	62 Rensselaer Ave.	Ogdensburg, N. Y.
2120	11	Roe, S. J.		Algonac, Mich.
2993	12	Reinhold, H. W.	Box 116	Cromwell, Minn.
1105	14	Reece, Geo. O.	1008 Clinton Ave.	St. Clair, Mich.
1950	14	Rinn, J. B.	509 2nd St.	St. Clair, Mich.
2389	14	Recor, Jos. F.	1002 Clinton Ave.	St. Clair, Mich.
2269		Richmond, U.	98 Regent St.	Port Arthur, Can.
418	1	Stevenson, Hugh	R. F. D. Seneca Rd.	Ebenezer, N. Y.
566	1	Shepard, A. M.		Goderich, Ont., Can.
1114	1	Stevenson, Geo. C.	606 Mersel Bldg.	Port Huron, Mich.
1313	1	Secord, C. D.	41 Rosehill Ave.	Toronto, Can.
1412	1	Stevenson, W. H.	144 Riverside Ave.	Buffalo, N. Y.
1654	1	Stevenson, Thos.	51 Briggs Ave.	Buffalo, N. Y.
1959	1	Sexsmith, Sam'l	1448 Highland Ave.	Lakewood, O.
377	2	Sinclair, D. M.	2037 Military St.	Port Huron, Mich.
1677	2	Stevenson, Wm.	2121 7th St.	Port Huron, Mich.

Pen. nant Lodge	Name	Address	City
1732 2	Sawyer, Edw. L.	Almont, Mich.	
2189 2	Stockdale, R. N. ..729 Division St.	Port Huron, Mich.	
1362 3	Sinclair, C. H. ....4229 N. Ashland Ave.	Chicago, Ill.	
1574 3	Strahan, Louis F..1321 Wells Ave.....	Escanaba, Mich.	
1638 3	Shea, Jos. A. ....6311 Glenwood Ave.	Chicago, Ill.	
1784 3	Simons, John ....307 E. North Water St....	Chicago, Ill.	
2156 3	Sederland, F. A. ..2506 W. 38th St.	Chicago, Ill.	
184 4	Stone, H. W. ....1858 Noble Rd., E.	Cleveland, O.	
223 4	Saph, C. M. ....715 N. 8th St.	Sheboygan, Wis.	
262 4	Stough, L. ....1711 W. 31st Place	Cleveland, O.	
760 4	Stone, L. W.	Vermillion, O.	
850 4	Slackford, W. G. ..1407 Campbell St.....	Sandusky, O.	
921 4	Steible, John ....912 2nd St.	Sandusky, O.	
1088 4	Saunders, T. H. ..1335 Rockefeller Bldg.	Cleveland, O.	
1303 4	Sutherland, W. T..154 N. Chest St.	Green Bay, Wis.	
1472 4	Salph, J. P. ....128 A. St.	Lorain, O.	
1489 4	Stewart, W. G. ....Care Pickands, Mather Co..	Cleveland, O.	
1550 4	Simmons, T. G. ....15709 Lake Ave.	Lakewood, O.	
1692 4	Stanley, Edw. ....10802 Clifton Blvd.....	Cleveland, O.	
1712 4	Storey, W. J. ....30 Kingsville Ave.....	Ashtabula, O.	
2132 4	Sturtevant, F. C. ..10209 Wilbur Ave.	Cleveland, O.	
2373 4	Scheible, H. J. ....1574 Mars Ave.	Lakewood, O.	
2386 4	Steinmann, J. J. ....4313 Apple Ave., S. W....	Cleveland, O.	
2390 4	Slade, J. J. ....8 Lorain Ave.	Highland Pk., Mich.	
2458 4	Smith, R. A. ....721-56th St.	Philadelphia, Pa.	
2984 4	Scheible, F. A. ....1575 Mars Ave.	Lakewood, Ohio.	
2997 4	Starr, C. H. ....1520 E. 85th St.	Cleveland, O.	
371 6	Sullivan, D. C. ....625 Prospect Ave.....	Milwaukee, Wis.	
496 6	Schmerman, Fred ..329-21st Ave.	Milwaukee, Wis.	
509 6	Scott, W. B. ....488 1-2 Walker St.....	Milwaukee, Wis.	
1111 6	Small, E. S. ....360 Hull Ave.....	Benton Harbor, Mich.	
1905 6	Sanders, H. L. ....649 Fredrick Ave.	Milwaukee, Wis.	
2364 6	Stufflebean, G. E. ..63 8th St.	Muskegon, Mich.	
2592 6	Sullivan, Jere. B..623 Prospect Ave.	Milwaukee, Wis.	
363 7	Swain, Martin ....471 Wabash Ave., Care R. M. North- wood	Detroit, Mich.	
586 7	Stewart, A. E. ....95 Willis Ave., E.	Detroit, Mich.	
636 7	Stoddard, Lewis ..158-28th Ave.	Seattle, Wash.	
1012 7	Smith, A. C.	Amherstburg, Ont.	
1183 7	Stevens, E. P. ....177 Jos. Campan Ave.	Detroit, Mich.	
1466 7	Simpson, F. J. ....911 Baldwin Ave.....	Detroit, Mich.	
1897 7	Sauer, George ....34 Pryor Ave. E.	Detroit, Mich.	

Pen. nant Lodge	Name	Address	City
2079 7	Sullivan, Wm. E.	310 Fullerton Ave.	Detroit, Mich.
2127 7	Sullivan, Thos. D.	204 W. Midland Ave.	Bay City, Mich.
2245 7	Sloan, Bernard	1355 1-2 E. LaFayette Ave.	Detroit, Mich.
799 8	Shaw, Geo. A.		Marine City, Mich.
1246 9	Stalker, A. W.	565 Church St.	Toledo, O.
1616 9	Sullivan, N. M.	3211 Detroit Ave.	Toledo, O.
2137 9	Slavin, Jos. F.	231 City Park Ave.	Toledo, O.
55 10	Shay, W. S.	76 Patterson St.	Ogdensburg, N. Y.
1958 10	Stitt, Geo. P.	709 Donald St.	Fort William, Ont.
1769 11	Stewart, M. M.		Algonac, Mich.
1770 11	Stewart, Jos. P.		Algonac, Mich.
1780 11	Smith, Sidney H.		Algonac, Mich.
2070 11	Stewart, Harry W.		Algonac, Mich.
2428 11	Stewart, H. A.		Algonac, Mich.
2023 12	Swenson, Albert	1001 Torrey Bldg.	Duluth, Minn.
2027 12	Slater, Fred. R.	5829 Johns Ave.	Superior, Wis.
2175 12	Seeley, H. D.	1724 Ogden Ave.	Superior, Wis.
2991 12	Saunders, T. H.	518 Bear St.	Buffalo, N. Y.
1952 14	Smith, A. C.	408 Jay St.	St. Clair, Mich.
2484 14	Sawher, Walter		St. Clair, Mich.
2512 14	Smith, Jas. H.		Courtwright, Ont., Can.
2433	Solevy, John H.	19 Springhurst Ave.	Toronto, Can.
69 1	Thorpe, E. F.	532 Parkside Ave.	Buffalo, N. Y.
1050 1	Thompson, Peter	Forest Road.	Williamsville, N. Y.
1591 2	Thompson, W. F.	1208 E. 5th St.	Duluth, Minn.
2163 2	Thody, F. W.	2004 7th St.	Port Huron, Mich.
1469 3	Tisdale, Geo. B.	1014 S. Lafayette St.	S. Bend, Ind.
1680 3	Taylor, Edward	4351 W. Monroe St.	Chicago, Ill.
1706 3	Trodahl, H. H.		Daggert, Mich.
1943 3	Thorsen, Louis	1904 N. Laundale Ave.	Chicago, Ill.
2068 3	Thayer, Chan. R.	8133 Dorchester Ave.	Chicago, Ill.
2387 3	Topic, Peter	634 Christiana Ave.	Chicago, Ill.
167 4	Tower, C. B.	4102 Clinton Ave.	Cleveland, O.
422 4	Thompson, J. C.	4202 Bailey Ave., S. W.	Cleveland, O.
1055 4	Tullian, G. D.	1247 E. 124th St.	Cleveland, O.
1096 4	Tear, F. S.		Painesville, O.
2957 4	Talbot, A. J., Jr.	906 E. Erie Ave.	Lorain, O.
1795 4	Thompson, M.	1864 Chapman Ave.	E. Cleveland, O.
2093 4	Tuferson, N. P.	R. F. D. No. 3, Lake Ave.	Elyria, O.
2957 4	Talbot, A. J., Jr.	906 E. Erie Ave.	Lorain, O.
2176 4	Tilden, L. S.	1829 Lake View Rd.	Cleveland, O.
1051 6	Tower, John	Milwaukee Tug Line.	Milwaukee, Wis.

Pen. nant Lodge	Name	Address	City
2123 6	Thorpe, J. E.	586-32nd St.	Milwaukee, Wis.
2338 6	Tilley, Robt. G. ...	214 Graham St.	Milwaukee, Wis.
2344 6	Tobin, Gordon ...	22 Cicotte St. E.	River Rouge, Mich.
657 7	Thorburn, John ...	Care W. A. Meddough..	Westhope, N. D.
1410 7	Talbot, Geo. E. ...	2635 2nd Ave....	Highland Park, Mich.
719 8	Tomlin, Wm. J. ....	.....	Marine City, Mich.
1157 8	Taylor, Jas.	157 Main St.....	Marine City, Mich.
1991 10	Travis, Fred	55 King St.	Ogdensburg, N. Y.
2098 11	Townsend, C. O. ..	Box 188	Algonac, Mich.
3005 12	Thibideau, F. J. ...	709 Garfield Ave.	Duluth, Minn.
1102 8	Utley, R. Z.	307 Elizabeth St....	Marine City, Mich.
1369 1	Vrooman, G. H. ..	Union Towing Co.....	Duluth, Minn.
1956 3	Voight, A. C.	4942 N. Leavitt St.	Chicago, Ill.
2067 3	VanVelzen, H. P. ...	1401 N. Avers Ave.	Chicago, Ill.
1501 4	Van Slet, A.	10101 Detroit Ave.....	Cleveland, O.
1371 8	VanGorden, C. ....	.....	Marine City, Mich.
63 1	Wilson, C. H., Sr. ..	706 W. 8th St.	Erie, Pa.
1312 1	Weinheimer, F. L. ..	452 Prospect Ave.	Buffalo, N. Y.
1385 1	White, A. E.	Care Washington Savings Bk.....	Washington, Mich.
1647 1	Weinheimer, F. W. ..	452 Prospect Ave.	Buffalo, N. Y.
1669 1	Watson, C. W.	Care Saginaw Ship Bldg, Co.	Saginaw, Mich.
1762 1	Wilkinson, R. B. ..	133 Kensington Blvd....	Buffalo, N. Y.
2533 1	Walle, Martin	141 Butler Ave.	Buffalo, N. Y.
1181 2	Warwick, Henry...Holland Beach.....	.....	Port Huron, Mich.
2095 2	Warwick, E. W.	2026 7th St.....	Port Huron, Mich.
2191 2	Ward, Peter	27 Taylor St.	Port Huron, Mich.
2502 2	Wilson, Alexander..	134 Crawford St.....	Sarnia, Ont., Can.
410 3	Williams, David ..	4321 Jackson Blvd.	Chicago, Ill.
294 3	Wallace, Chas. H. ..	521 E. North Water St....	Chicago, Ill.
932 3	Welmar, Fred T. ...	2003 Estes Ave.	Chicago, Ill.
1471 3	Wilson, C. H., Jr. ..	832 W. 8th St.	Erie, Pa.
1722 3	Weaver, Geo. W. ...	Box 374	Charlevoix, Mich.
2963 3	Wilson, Edward ...	910 Airdrie Place	Chicago, Ill.
305 4	Weeks, J. L.	1449 Robinwood Ave....	Lakewood, O.
761 4	Woodford, C. H. ..	Care Pickands, Mather Co..	Cleveland, O.
965 4	Ward, John	3rd Floor Electric Bldg....	Cleveland, O.
1001 4	Walder, R. J.	232-4th St. North	St. Petersburg, Fla.
1058 4	Willoughby, W. J. ..	167 Victoria Ave.....	Windsor, Can.
1044 4	Williams, Edw. ...	7507 Lawn Ave.	Cleveland, O.

Pen- nant Lodge	Name	Address	City
1121 4	Woodward, E. D.	1020 Rockefeller Bldg., care L. C. Hinslea	Cleveland, O.
1533 4	Wood, J. S.	2994 Scarborough Rd.	Cleveland, O.
1593 4	Wilman, Dan	3403 W. 98th St.	Cleveland, O.
1621 4	Walper, Henry	24 Exchange St.	Vermilion, O.
2160 4	Wade, F. J.	1310 W. 106th St.	Cleveland, O.
2162 4	Wendorf, H.	R. F. D. No. 3	Warren, Ohio.
2362 4	Woodford, Roy	1406 W. 25th St.	Cleveland, O.
2985 4	Wexler, R. D.	11310 Fairport Ave.	Cleveland, O.
1124 6	Warwig, J. D.	619 Prospect Ave.	Milwaukee, Wis.
1133 6	Woods, John	184 Water St.	Milwaukee, Wis.
2297 6	Winkler, Herman	414 N. 6th St.	Manitowoc, Wis.
2980 6	Whitlock, D. T.	care Illinois Steel Co. Dock	Milwaukee.
336 7	Watts, Jos. B.	617 Sheridan Road	Detroit, Mich.
352 7	Williams, W. H.	36 Claremont Ave.	Detroit, Mich.
1132 7	West, B. E.	327 St. Clair Ave.	Detroit, Mich.
1408 7	Wilson, Wm.	133 E. 84th St.	N. Y., N. Y.
1548 7	Webster, C. T.	309 Stevens Bldg.	Detroit, Mich.
1597 7	Wilkinson, C.	865 Congress St.	Detroit, Mich.
1893 7	Woodgrift, C. H.	R. F. D. No. 2	Farmington, Mich.
2072 7	Worden, Scott	189 Euclid Ave.	Detroit, Mich.
1837 8	Williamson, P. L.	123 Wakefield Ave.	Buffalo, N. Y.
2130 8	Welhousen, H. C.	338 Woodworth St.	Marine City, Mich.
1955 9	Warner, Raymond	409-3rd St	Toledo, O.
980 10	Walsh, Jas. A.	97 Morris St.	Ogdensburg, N. Y.
1749 10	Woods, Wm. V.	211 Washington St.	Ogdensburg, N. Y.
2076 10	Woods, Arthur F.	68 Morris St.	Ogdensburg, N. Y.
1914 11	Warner, W. E.	Box 303	Algonac, Mich.
2534 11	Warner, C. W.		Algonac, Mich.
2510 12	Wickstrom, Aug.	R. F. D. No. 1	Saginaw, Mich.
2948 12	Weborg, Irvin O.	1230 Parnell St.	Marinette, Wis.
1586 14	West, Fred A.	540 No. 3rd St.	St. Clair, Mich.
2513 14	Warwick, Geo. A.		Courtwright, Ont., Can.
2522 14	Watson, F. W.	209 N. 2nd St.	St. Clair, Mich.
2859 14	Wolvin, El. B.	535 N. Riverside Ave.	St. Clair, Mich.
2960 14	Webster, W. M.	Route 4	St. Clair, Mich.
40 3	Young, Robert	Dunham Towing Co.	Chicago, Ill.
1643 7	Yates, Wm. H.	Perry Apts.	Wyandotte, Mich.
2951 7	Yates, George	888 Mitchell St.	Detroit, Mich.
2945 3	Zwemer, George	350 W. 77th St.	Chicago, Ill.
2066 4	Zeeland, Thos. F.	1598 Woodward Ave.	Lakewood, O.

NAMES AND ADDRESSES OF ASSOCIATE MEMBERS, INTERNATIONAL SHIP MASTERS' ASSOCIATION.

Pennant	Name	Address	City
A 9	Oliver W. Upson...	1310 River Ave., N. W....	Cleveland, O.
A 12	A. F. Harvey.....	1600 Rockefeller Bldg.....	Cleveland, O.
A 13	Harvey D. Goulder.	1561 Euclid Ave.....	Cleveland, O.
A 15	J. S. Ashley.....	243 Oliver St.....	Cleveland, O.
A 16	W. H. Becker.....		Dover, O.
A 18	Herman A. Kelly...	Overlook Road, Euclid Heights	Cleveland, O.
A 27	Chas. W. Elphicke.....		Chicago, Ill.
A 30	Henry J. Pauly.....	207 14th St.....	Milwaukee, Wis.
A 32	H. Coulby		Cleveland, O.
A 33	M. A. Bradley.....	1378 Euclid Ave.....	Cleveland, O.
A 34	T. F. Newman.....	724 Genesee St.....	Cleveland, O.
A 35	Frank W. Fletcher.....		Alpena, Mich.
A 36	G. A. Tomlinson.....		Duluth, Minn.
A 38	F. B. Wadhams.....	465 E. 55th St.	Cleveland, O.
A 40	John H. Schlosser..	22 Hanover St.....	Milwaukee, Wis.
A 46	John J. Boland....	Prudential Bldg.	Buffalo, N. Y.
A 47	S. W. Gould.....	1595 E. 86th Street....	Cleveland, Ohio
A 48	James McAlpine ...	1217 Chamber of Com....	Buffalo, N. Y.
A 49	W. E. Lloyd.....	G. Lakes Transit Co....	Buffalo, N. Y.
A 51	Harvey L. Brown...	439 Richmond Ave.	Buffalo, N. Y.
A 53	J. B. Rodgers.....	1217 Chamber of Com....	Buffalo, N. Y.
A 55	John B. Richards...	1317 Chamber of Com....	Buffalo, N. Y.
A 56	Dell. L. Tuttle.....	Prudential Bldg.	Buffalo, N. Y.
A 57	John Connelly	126 Fargo Ave.	Buffalo, N. Y.
A 58	J. C. Oberscheimer.	1217 Chamber of Com.	Buffalo, N. Y.
A 60	Adam E. Cornelius.	Prudential Bldg.	Buffalo, N. Y.
A 61	J. C. Evans.....	Great Lakes Transit Co. ...	Buffalo, N. Y.
A 63	J. E. Upson.....	11447 Euclid Ave.....	Cleveland, O.
A 67	Thos. J. Rennick...	98 Bridge St.....	Ashtabula, O.
A 68	H. K. Oakes.....		Cleveland, O.
A 69	T. A. Cheney.....	25 Walnut St.....	Ashtabula, O.
A 70	E. Lawrence		Fairport, O.
A 71	H. W. McGean.....	1845 E. 79th St.....	Cleveland, O.

Pennant	Name	Address	City
A 72	C. L. Hutchinson	Rockefeller Bldg.	Cleveland, O.
A 74	H. B. Drake	2309 E. 93rd St.	Cleveland, O.
A 76	C. C. Lankin	Asot Apts., Crawford Rd.	Cleveland, O.
A 77	Jas. O'Connor	167 Morgan St.	Tonawanda, N. Y.
A 78	F. H. Burrill	54 Spruce St.	Ashtabula, O.
A 81	E. C. Collins	1927 E. 97th St.	Cleveland, O.
A 82	C. C. Canfield	10215 Winchester Ave., N. E.	Cleveland, O.
A 85	Thos. Sheriffs	277-25th St.	Milwaukee, Wis.
A 86	Carl C. Joys	358 Hanover St.	Milwaukee, Wis.
A 87	Jos. Davidson	356 Virginia St.	Milwaukee, Wis.
A 89	A. W. Thompson	1304 Rockefeller Bldg.	Cleveland, O.
A 93	Mathias Young	Lehigh Valley Line	Buffalo, N. Y.
A 100	H. H. Thompson	1212 E. 4th St.	Duluth, Minn.
A 101	Daniel D. Murray	2028 E. Superior St.	Duluth, Minn.
A 105	Clarence Richardson	Leader-News Bldg.	Cleveland, O.
A 108	James Mowatt		Chicago, Ill.
A 109	Thomas Becton		Port Huron, Mich.
A 120	Wm. Nagle	Care Whitman Mach. Co.	Buffalo, N. Y.
A 127	D. C. Deegan	6254 Stony Island Ave.	Chicago, Ill.
A 128	R. D. Mitchell	965 Rockefeller Bldg.	Cleveland, O.
A 129	Lieut. J. C. Clarke		Cleveland, O.
A 130	Herman Oertling	509-50th St.	Milwaukee, Wis.

NAMES AND ADDRESSES OF HONORARY MEMBERS, INTERNATIONAL SHIP MASTERS' ASSOCIATION

Pennant	Name	Address	City
H 16	J. S. Henderson	3448 Carroll Ave.	Chicago, Ill.
H 17	Wm. Langell		St. Clair, Mich.
H 18	George Bugge		St. Clair, Mich.
H 19	J. H. Trumble		St. Clair, Mich.
H 20	S. A. Earle		St. Clair, Mich.
H 21	Wm. A. Morrison		St. Clair, Mich.
H 22	Wm. Wright		St. Clair, Mich.

Names and Addresses

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Penant	Name	Address	City
H 23	Wesley C. Brown	St. Clair, Mich.
H 24	W. T. Landon	St. Clair, Mich.
H 25	H. G. Inman	27-57th Ave., E.	Duluth, Minn.
H 26	C. B. Carroll	R. F. D.	Duluth, Minn.
H 29	A. McDonald	W. 3rd Street	Oswego, N. Y.
H 72	Robert Brown	49 W. Seneca St.	Buffalo, N. Y.
H 73	W. M. Connelly	715 Rockefeller Bldg.	Cleveland, O.
H 74	Morris Crawford	74 Michigan Ave.	Buffalo, N. Y.
H 75	John Gehm	45 Elk St. Market.	Buffalo, N. Y.
H 76	P. J. Gunn	120 Michigan Ave.	Buffalo, N. Y.
H 77	J. A. Grodzinski	Ellicott Sq.	Buffalo, N. Y.
H 78	Thomas Hayden	360 Main St.	Buffalo, N. Y.
H 79	Daniel Hourigan	.....	Oswego, N. Y.
H 80	A. H. Kropman	340 Washington St.	Buffalo, N. Y.
H 81	L. Lautenslager, Jr.	Care Hands & Johnson Tug Office,	Buffalo, N. Y.
H 82	John E. Morris	162 Bailor St.	Buffalo, N. Y.
H 83	Albert Norton	227 Franklin St.	Buffalo, N. Y.
H 84	Thomas Quinn	Foot Michigan Ave., Care Hedstrom Coal Dock Office.	Buffalo, N. Y.
H 85	J. A. Weisback	202 Main St.	Buffalo, N. Y.
H 86	Harry Wright	17 Elk St.	Buffalo, N. Y.
H 87	A. J. Green	Summit Ave.	Lakewood, O.
H 88	E. W. Dissette	1892 E. 87th St.	Cleveland, O.
H 109	S. W. Robinson	.....	Holland, Mich.
H 110	Church, Hon. Thos.	.....	Toronto, Ont.
H 112	Chas. Norton	.....	Marine City, Mich.
H 113	R. A. Cottrell	444 N. Main St.	Marine City, Mich.
H 116	Jno. W. Brown	.....	Mount Ayr, Ind.
H 117	A. Bassett	.....	Chicago, Ill.
H 118	Jos. Davish	.....	Chicago, Ill.
H 119	Dan. Henderson	.....	Cleveland, O.
H 120	H. J. Regan	.....	Marine City, Mich.
H 121	M. B. Roach	.....	Marine City, Mich.

MEMBERS OF THE INTERNATIONAL SHIPMASTER'S ASSOCIATION.

Arranged According to Pennant Numbers
Pennant Numbers 15 to 464 Inclusive.

Pennant	Lodge	Name	Pennant	Lodge	Name
15	7	Ivers, J. H.	262	4	Stough, Lafayette
17	1	Dunn, John	269	4	Holmes, Jos. A.
22	1	Hogg, G. L.	274	4	Collier, Wm. A.
40	3	Young, Robert	290	4	Call, Richard
44	4	Chapman, A. C.	294	3	Wallace, Chas. H.
49	1	Robinson, Walter	300	3	McCambridge, T.
50	1	Corcoran, Joseph	302	4	Mallory, D. H.
55	10	Shay, W. S.	305	4	Weeks, J. L.
56	3	Root, F. D.	307	4	Ames, William D.
63	1	Wilson, Chas. H., Sr	315	1	McEachern, A.
69	1	Thorp, E. F.	317	1	Drake, A. B.
89	2	Kendall, H. J.	319	1	Buie, Daniel
104	1	Berow, Joseph H.	336	7	Watts, Jas. B.
105	1	Durker, Henry	339	4	Mulholland, Matt.
108	1	Murphy, Henry	350	14	O'Connor, R.
116	1	Coleman, Jeremiah	352	7	Williams, W. H.
120	1	Grasser, George	358	4	Olsen, Olaf
129	1	Murphy, S. M.	362	3	Higgins, Thomas
140	2	Powrie, P. F.	363	7	Swain, Martin
149	3	Carr, James	370	3	Clow, J. M.
160	4	Hoover, N. E.	371	6	Sullivan, D. C.
164	4	Lowe, James B.	377	2	Sinclair, D. M.
167	4	Tower, Chas. B.	388	2	Harrow, W. B.
176	4	Mallory, G. B.	391	4	Hinslea, Chas. H.
182	4	Lowe, John	394	1	Johnson, John
184	4	Stone, Henry W.	410	3	Williams, David
197	4	Lyons, R. J.	412	3	Moore, Chas. K.
199	3	Disher, William	418	1	Stevenson, Hugh
223	4	Saph, C. M.	422	4	Thompson, J. C.
234	4	Benham, C. E.	433	4	Cleveland, C. R.
247	4	Flick, F. A.	439	6	Carter, W. J.
253	7	Armstrong, Byron	450	3	Minskey, J. P.
254	3	Moore, H. R.	464	7	Nicholson, D.

Pennant	Lodge	Name	Pennant	Lodge	Name
477	6	Maxon, F. C.	761	4	Woodford, C. H.
488	6	Anderson, O. N.	767	7	McIntosh, M. G.
496	6	Schwerman, Fred	786	8	Hagan, Wm.
498	6	Leisk, John	799	8	Shaw, G. A.
500	6	Leisk, Henry	804	2	Brown, C. T.
501	6	Doak, John A.	810	4	Lalonde, Anthony
505	6	Boyce, H. M.	821	1	Rowan, Murdock
506	4	Hawgood, A. H.	826	9	Herrick, T. C.
507	6	McSweeney, John	827	1	Cunningham, Jas.
509	6	Scott, W. B.	850	4	Slackford, W. G.
515	6	McGregor, W. F.	854	9	Ashley, Ed. G.
528	7	Hutton, John T.	856	9	McKinley, Jas.
532	7	Duncanson, D. F.	861	2	Chambers, A. P.
542	3	McDonald, Geo.	875	7	McCallum, H. C.
543	3	MacLean, Donald	891	1	Madigan, Jas. A.
553	9	Harlow, Wm. J.	899	3	Elliott, A. M.
557	2	Laframboise, Jas.	902	3	Robertson, Geo.
558	4	Rae, Frank C.	910	7	McLean, Wm.
566	1	Shepard, A. M.	914	4	Carlos, W. S.
570	4	Anderson, Joseph	921	4	Steible, John
572	6	Hubbard, Chas. H.	932	3	Weimar, Fred T.
576	2	Maitland, Henry	941	3	McIntyre, Allen
586	7	Stewart, A. E.	952	4	Eldridge, H. C.
612	7	Fox, Arthur J.	959	4	Moody, Wm. H.
613	9	Meikleham, Thos.	960	4	Lampoh, Jos.
629	7	Ferguson, Robt. E.	965	4	Ward, John
636	7	Stoddard, Lewis	971	4	Fleck, James A.
641	2	Harper, Geo.	972	7	McAlpin, John
642	3	Cochrane, David	973	3	Brion, James W.
657	7	Thorburn, John	980	10	Walsh, James A.
666	7	Holbrook, F. H.	982	4	Benham, Wm. P.
694	4	Peterson, C. A.	983	4	Detlifs, Emil
695	4	Miller, C. D.	986	3	Gallino, A. P.
698	4	Bell, Geo. A.	987	7	Hutchins, F. C.
708	4	Rice, Frank	988	4	Megervey, Wm.
719	8	Tomlin, Wm. J.	994	2	Manuel, Fred W.
732	7	Mara, James	995	2	Budd, Melvin A.
738	4	Cottrell, Geo. L.	1001	4	Walder, R. J.
750	7	Livingston, W., Jr.	1004	4	Hoag, Wm. S.
755	7	McLarty, James	1010	4	Laframboise, Jacob
760	4	Stone, Lewis W.	1012	2	Cowles, Wm. S.

Pen- nant Lodge	Name	Pen- nant Lodge	Name
1013	7 Smith, A. C.	1106	4 Heaton, Chas. H.
1014	2 Johnston, Edward	1109	2 Neal, Jas. S.
1016	1 Green, John D.	1111	6 Small, E. S.
1017	4 Hunt, Wm. J.	1112	7 McCarthy, Daniel
1021	2 Bennett, Jas. S.	1114	1 Stevenson, Geo. C.
1026	4 Fox, Benson	1115	4 Jones, John F.
1029	1 Herbert, Fred	1116	4 Allen, C. L.
1032	6 Moody, Chas. E.	1117	7 Burke, Enos J.
1035	4 Ingraham, F. E.	1121	4 Woodward, Chas. D.
1038	4 Allen, Sam'l C.	1122	7 Kearns, Joseph
1039	4 Post, Jos. W.	1124	6 Wanvig, John D.
1041	4 Ferguson, Wm.	1125	4 Christensen, A.
1043	3 Rand, Leroy A.	1126	9 Benson, Dan.
1044	6 Williams, Edward	1127	4 Dyble, Edward
1045	1 Wilkins, W. W.	1131	9 Jex, H. N.
1047	1 Martin, Edward	1132	7 West, Bert E.
1050	1 Thompson, Peter	1133	6 Woods, John
1051	6 Tower, John	1135	4 Craigle, Alex.
1052	7 McGuire, Norman	1136	4 Hergenrother, J. A.
1054	7 Goodrow, Frank	1137	7 Balfour, C. C.
1055	4 Tullian, G. D.	1140	1 Hansen, A. C.
1058	4 Willoughby, W. J.	1147	9 Deville, D. F.
1059	4 Driscoll, Jas. H.	1148	6 Olson, Sam
1060	1 Gibson, James R.	1150	14 Greening, Wm.
1065	7 McIntosh, John L.	1151	7 Wilkinson, Fred
1068	4 Bouille, David	1155	1 Montgomery, J. W.
1069	4 McGarry, John	1157	8 Taylor, James
1070	4 Cody, F. B.	1169	1 O'Day, Simon
1073	7 Mahon, A. J.	1170	3 Minter, Thos. B.
1075	7 Donaghue, E. J.	1172	3 Christopher, S.
1076	7 Crosby, Wm. J.	1175	7 Millen, P. L.
1079	9 Lockhart, D. O.	1177	4 Burr, James L.
1081	7 Johnson, Alex.	1179	1 O'Neil, Patrick
1082	7 Mallette, Paul A.	1181	2 Warwick, H'y.
1085	7 Clark, Alex. A.	1182	7 Parsons, H. H.
1088	4 Saunders, Thos. H.	1183	7 Stevens, E. P.
1091	1 Howe, Alfred B.	1184	4 Hinslea, Henry
1095	6 Duddleson, John W.	1185	4 Parson, F.
1096	4 Tear, F. S.	1187	1 Hartman, John J.
1101	2 Burns, John	1193	7 Bertrand, Frank
1105	14 Reece, Geo. O.	1194	7 Maddock, J. B.

Pen- nant Lodge	Name	Pen- nant Lodge	Name
1197	4 Hand, A. S.	1329	4 Peterson, Peter A.
1198	8 Brown, Hector	1344	6 Preston, John R.
1199	8 McCann, S. B.	1352	4 Leckie, Frederic L.
1201	7 Parsons, Joseph	1355	7 Christie, Charles
1203	7 Maddock, J. C.	1356	7 Baker, Harris W.
1204	4 Hahn, C. P.	1359	3 Higgle, J. F.
1207	2 Neal, Wm. D.	1360	6 Dailey, Michael
1208	12 Jacobson, Jacob E.	1361	4 Faragher, William
1219	4 England, Rich. W.	1362	3 Sinclair, Cyrus H.
1224	4 McAlpine, Hugh	1363	3 Elliott, Frank
1229	8 Kenyon, S. W.	1368	4 Anderson, Chas. A.
1233	7 Parsons, Dudley R.	1369	1 Vrooman, Geo. H.
1236	4 Bouille, Pierre	1371	8 Van Gorder, Chas.
1237	4 Kelly, Henry	1374	7 Callam, Alex. C.
1238	4 Murdock, Jno. A.	1377	7 Robinson, Salem O.
1240	2 Kelly, James W.	1381	3 Lamoreaux, Joseph
1241	2 Canartney, M.	1384	4 Bartel, A. E.
1243	8 Kuhn, John	1385	1 White, A. E.
1244	7 Clifford, Alex.	1386	4 Ferguson, John A.
1246	9 Stalker, A. W.	1388	1 Klock, Everett
1247	6 Cook, J. G.	1392	1 Peterson, M. S.
1249	6 Solean, O. J.	1393	1 Clark, John C.
1252	9 Cunningham, J. J.	1394	4 Johnson, Martin
1254	2 Reed, Wm. A.	1395	4 Nordahl, Arnold
1256	7 Quinlan, Wm.	1397	7 Baker, Burton S.
1257	8 Cottrell, Jas. E.	1402	8 Markle, S. J.
1266	9 Kirker, Fred	1403	4 Goodwin, Jas. F.
1269	3 Patterson, Wm.	1408	7 Wilson, Wm.
1284	7 Rains, Ed. T.	1410	7 Talbot, Geo. E.
1294	1 Burns, John J.	1411	7 Anderhalt, L. P.
1295	4 Landfair, B. M.	1412	1 Stevenson, Wm. H.
1303	4 Sutherland, Wm. T.	1415	4 MacLachlan, A. H.
1304	9 Harlow, Frank T.	1417	7 Forbes, Alexander
1307	4 Reid, Fred'k H.	1421	8 Hill, Fred C.
1308	3 Campau, Louis A.	1423	4 Banker, Geo. H.
1312	1 Weinheimer, F. L.	1425	3 Edwards, M. L.
1313	1 Secord, C. D.	1427	3 Bough, Chas.
1314	1 Grant, J. C.	1433	7 MacLean, Wm. J.
1315	12 MacGregor, Willson	1434	7 Recor, Geo. F.
1321	4 Anderson, Mathew	1435	7 Rattray, Chas.
1328	11 Ames, Augustus	1437	3 Kohnert, J. E.

Pen- nant Lodge	Name	Pen- nant Lodge	Name
1438	4 Colbert, Thos.	1527	6 Hendricksen, Otto
1442	4 Keller, Alva H.	1528	4 Pringle, Rob't C.
1443	7 Iler, Walter C.	1531	14 Brown, Nelson
1444	3 Olsen, John K.	1532	6 Jones, Warren
1445	3 Cullnan, John	1533	4 Wood, J. S.
1446	4 Fitch, Edward	1534	8 Duplue, Frederic A.
1447	7 Craig, John C.	1536	3 Evans, Rob't T.
1454	4 Bailey, F. A.	1539	6 Dority, Frank A.
1457	3 Fitch, Edward	1542	4 Buchanan, James
1462	4 McDonald, Wm.	1547	7 Hosner, V. L.
1464	1 Finnegan, Owen P.	1548	7 Webster, Chas. T.
1465	7 Flaherty, Joseph	1550	4 Simmons, Thos. G.
1466	7 Simpson, Fred. J.	1552	6 Garrity, Thomas
1467	9 Dunseith, John	1553	4 Holdridge, George
1469	3 Tisdale, Geo. B.	1555	2 Hughes, Henry S.
1471	3 Wilson, Chas. H., Jr.	1557	4 McGarry, George
1472	4 Saph, Jay P.	1559	9 Lohr, John M.
1479	11 Jackson, Rich. C.	1561	6 McShane, Daniel W.
1482	4 Packer, Wm. H.	1562	1 Milne, John
1483	4 Ellis, Frank S.	1563	4 Conkey, Charles M.
1487	9 Lyons, Jas. B.	1566	6 DuClos, Napoleon
1489	4 Stewart, Walter G.	1568	3 Green, Arnold
1490	11 Lyons, Stephen A.	1572	4 Moore, Frank
1492	4 Dixon, Alfred	1574	3 Strahan, Louis F.
1493	4 Gould, Francis E.	1577	4 Burt, George G.
1494	12 Erhart, John W.	1578	1 Kelley, Andrew
1495	2 Cassin, Jas.	1580	4 Meeker, S. E.
1497	1 Herbert, James G.	1586	14 West, Fred A.
1498	3 Anderson, Sigverdt	1585	7 Gatfield, E. D.
1500	4 Thompson, Robt.	1582	7 Merckel, C. G.
1501	4 Vanslet, Abram	1587	4 Millikin, Wm.
1503	2 Bradshaw, John L.	1588	4 Grashaw, Walter
1504	2 McLean, J. C.	1589	4 Burns, T. C.
1508	1 Clarke, W. E.	1590	2 Randall, Frank
1513	6 Anderson, Gus. E.	1591	2 Thompson, W. F.
1519	1 Dunn, Thos.	1592	7 Bain, A. J.
1522	4 Randall, A. E.	1593	4 Wilman, Dan
1523	4 Culp, Hamilton	1594	12 Maloney, Forrest
1524	7 Pickell, E. S.	1595	4 Girardin, W. L.
1525	6 Bennett, Geo. J.	1596	4 Gustafson, Peter
1526	7 Gordon, D. G.	1597	7 Wilkinson, Chas.

Pennant Lodge	Name	Pennant Lodge	Name
1603	3 Johnson, Carl	1687	1 Koch, Robert
1605	3 Bright, W. T.	1688	7 Leonard, Roy M.
1609	2 Carlisle, Theo. J.	1689	7 Autterson, Chas.
1610	1 Barclay, John	1690	6 Kearns, Chas. J.
1612	7 Hansen, John T.	1691	6 Brownell, Jos. A.
1616	8 McDonald, G. W.	1692	4 Stanley, Edward
1617	3 Lang, Julius	1694	7 Morrison, J. N.
1619	3 McQueen, W. A.	1695	3 Miller, Chas. F.
1621	4 Walper, Henry	1696	6 Clausson, Gus T.
1622	4 Moore, S. S.	1698	3 Meyer, Gust.
1623	7 Norvell, Walker	1699	3 Hansen, Andrew
1629	2 Fowler, Thomas	1700	3 Anderson, Alex. A.
1631	7 McCarthy, John	1702	4 Moore, Wm. E.
1633	1 Gebhard, Frank R.	1704	4 Mason, Chas. D.
1635	6 Redner, Elmer E.	1705	1 Acton, Joseph
1638	3 Shea, Jos. A.	1706	3 Trodahl, H. H.
1641	4 Anderson, P. A.	1707	7 Hornig, Wm. F.
1643	7 Yates, Wm. H.	1709	4 Talbot, A. J.
1644	7 Ludington, Lewis	1710	4 Robinson, John W.
1651	1 Brooks, Wm. H.	1711	4 Reid, Wm. C.
1652	1 McDonald, J. A.	1712	4 Storey, Wm. J.
1654	1 Stevenson, Thos.	1713	4 Morton, Edw. R.
1656	2 Montgomery, W. L.	1714	4 Birmingham, Jas.
1661	2 Knapp, R. H.	1715	8 Booth, Wm. H.
1664	2 Crooker, D. M.	1716	1 Bennett, Chas. D.
1667	12 Pierce, W. L.	1717	1 Crawford, Geo. B.
1668	2 Ditzel, Henry E.	1719	1 Donahue, Joseph
1669	1 Watson, C. W.	1720	4 Olsen, Oscar
1670	1 Drury, John E.	1722	3 Weaver, Geo. W.
1671	7 Ashley, W. A.	1723	1 Gibson, James
1672	14 Doner, James	1724	3 Morgan, M. F.
1673	7 Brown, Claud D.	1725	7 McDonald, John A.
1675	4 Mooney, Wm.	1726	1 O'Hagan, John
1676	9 Sullivan, N. M.	1727	1 Broderick, Benj.
1677	2 Stevenson, Wm.	1728	1 Hefferman, Jas.
1678	6 Lee, Iver M.	1730	2 Crockett, Tyler J.
1679	4 Fowlie, Andrew	1731	2 Comins, Alonzo B.
1680	3 Taylor, Edward	1732	2 Sawyer, E. S.
1682	6 McCauley, C.	1733	10 Anderson, S. V.
1683	7 Dorry, Benj. B.	1734	10 Leonard, M. A.
1684	2 Geel, Guy G.	1736	10 Murphy, H. A.

Pen- nant Lodge	Name	Pen- nant Lodge	Name
1737 10	Nelson, Chas. O.	1803 4	Durney, John
1738 10	Powers, John J.	1804 4	Nelson, Olaf
1739 10	Dunn, Chas. A.	1807 4	Perew, Frank D.
1740 10	Nelson, A. C.	1809 1	Lucas, W. J.
1741 10	Russell, Henry	1810 1	McClinton, W. D.
1746 10	Kinch, Geo. H.	1814 1	McLeod, Dugald
1749 10	Woods, Wm. V.	1815 7	Fox, Chas.
1753 1	O'Hagan, Hugh	1816 4	Allen, Merton G.
1754 1	Hanley, Chas. C.	1817 1	Montgomery, Jno. A.
1756 1	Holmberg, Henry	1818 6	Oakley, James
1757 1	McLaren, Benj. C.	1819 6	Carus, Edward
1759 1	Hayes, W. J.	1820 14	Hollingshead, John
1760 1	Hefferman, T. N.	1821 4	Moore, George W.
1762 1	Wilkinson, Rob't B.	1826 7	Pearson, John J.
1763 6	Mackey, Melvin	1827 7	Burns, Geo. C.
1764 4	Peterson, F. J.	1828 7	Ernest, C. W.
1765 6	Larsen, N. L.	1829 7	Nesbit, W. K.
1766 14	Doner, Thos. F.	1830 7	Byers, J. Clark
1767 2	Johnston, Martin	1832 7	Honner, G. W.
1768 2	Brown, Chas. D.	1833 6	McCauley, Chas.
1769 11	Stewart, Mil'rd M.	1834 7	Hayward, Geo.
1770 11	Stewart, Chas. P.	1835 14	Lowes, Jos. H.
1771 11	Galton, F. D.	1836 2	Millard, Wm. L.
1772 11	Kendall, Douglas	1837 8	Williamson, P. L.
1774 11	Little, Nelson T.	1842 8	Recor, Rob't Jas.
1776 11	Kenworthy, Sam'l J.	1843 4	Ritchie, W. S.
1778 11	Moore, S. D.	1844 1	Clarke, Jas. M.
1779 11	Grant, Theo.	1845 1	Chilson, W. E.
1780 11	Smith, Sidney H.	1848 8	Recor, Edgar O.
1781 11	Mitchell, Alvin	1851 7	Huntoon, Fred A.
1784 3	Simons, John	1852 7	Jagenow, Wm.
1785 7	Klinger, Geo. N.	1854 7	McKay, Daniel
1786 7	Hackett, Thos. H.	1857 3	McKenzie, Ken.
1787 7	DeNike, Lee C.	1858 3	Post, Samuel G.
1789 4	Logan, John A.	1860 6	Olson, Samuel
1790 12	Massey, Chester	1861 6	Cavanaugh, J. F.
1792 7	Peltier, Robt. D.	1864 10	Dubrule, E. A.
1795 4	Thompson, M. S.	1865 4	Noble, John
1797 7	Judson, H. W.	1867 1	Abel, Wm.
1799 10	McDonald, John	1878 6	Hoxie, A. K.
1800 10	Loveless, Fred	1881 7	Hoffman, Frank

Pennant	Lodge	Name	Pennant	Lodge	Name
1884	6	Hays, John C.	1960	8	Baird, John D.
1885	6	Evanson, Arnold	1961	7	Cannally, James T.
1888	7	Ogden, B. F.	1962	1	Myers, Ralph D.
1890	10	Casey, Henry	1964	14	Morse, A. R.
1891	10	Delaney, Geo. J.	1967	8	Lavelly, L. J.
1892	1	Apsey, A. W.	1970	6	Franklin, W. E.
1893	7	Woodgrift, Chas. H.	1973	4	Malott, J. W.
1896	7	Palmer, Alfred J.	1974	3	Fischer, Robert
1897	7	Sauer, Geo.	1975	3	Eger, W. W.
1899	7	MacAulay, Geo.	1976	1	Johnson, Alfred
1901	7	Lightbody, J.	1977	9	Cornwall, Alton W.
1902	8	Utley, R. Z.	1988	7	Jones, Charles A.
1903	8	Beall, A. R.	1990	8	McNeill, Walter H.
1904	8	Mitchell, Dana R.	1991	10	Travis, Frederick
1905	6	Sanders, H. L.	1995	1	Morin, Thomas F.
1908	6	Cartwright, Peter	1996	3	Leith, Wm. R.
1909	3	Jaenke, Herman M.	1998	2	Krenkel, Chas. F.
1910	3	Berentsen, Jacob	1999	2	McDonald, J. E.
1911	10	Gamash, Frederick J.	2000	8	Langell, Leonard P.
1914	11	Warner, W. E.	2002	4	Dunn, P. H.
1915	14	Kenyon, Wm. S.	2003	10	Dessert, Wm. G.
1916	9	Adams, Joseph	2004	3	Hansen, Hans
1920	7	Gleason, John F.	2005	3	Lindale, T. T.
1924	14	Hayward, E. H.	2006	3	Rinn, Wm.
1926	1	Mallory, R. A.	2007	1	Ernest, Frank H.
1936	6	Richardson, Frank	2010	3	Morrison, Dougal
1937	7	McGowen, Hugh L.	2014	1	Jansen, Jacob C.
1940	6	Alexander, Algie	2016	1	McFadden, M. L.
1943	3	Thorsen, Louis	2022	2	Frilay, Herman W.
1945	1	Burns, James	2023	12	Swenson, Albert
1946	9	Holman, Henry	2024	12	Jones, Albert M.
1949	14	Conlin, Thos. N.	2025	12	Glockle, M. B.
1950	14	Rinn, J. B.	2027	12	Slater, Fred R.
1951	2	Foster, John	2030	12	Fox, Henry
1952	14	Smith, Alex. C.	2032	12	Doherty, John E.
1953	14	Autterson, Jos. W.	2034	12	Brower, Harry F.
1954	4	Cowie, Andrew	2037	12	Glenn, Martin E.
1955	9	Warner, Raymond	2039	12	Murphy, Oswald
1956	3	Voight, A. C.	2042	12	Green, Chas. H.
1958	10	Stitt, Geo. P.	2044	12	Johnson, Henry
1959	1	Sexsmith, Sam'l	2046	12	McDougall, Thos.

Pen- nant Lodge	Name	Pen- nant Lodge	Name
2047 11	Atkinson, Geo. A.	2123 6	Thorpe, John E.
2049 1	Green, Joseph M.	2124 6	Mellan, Gunerius
2052 6	Palm, Edward	2127 7	Sullivan, Thos. D.
2055 1	Coughlin, Michael	2130 8	Willhousen, H. C.
2058 4	Dodge, Wm. J.	2132 4	Sturtevant, Fred. C.
2061 3	Johnson, Geo. E.	2132 12	Nelson, F. E.
2064 4	Clegg, Harry J.	2133 8	Plotter, Chas. L.
2066 4	Zeland, Thomas J.	2134 4	Neville, R. J.
2067 3	VanVelzen, H. P.	2137 9	Slavin, James F.
2068 3	Thayer, C. R.	2138 4	Pringle, Walter R.
2069 14	Finnegan, Herbert	2141 4	Dunn, W. R.
2070 11	Stewart, Harry W.	2142 4	McNaughton, Roy
2071 11	Campbell, R.	2143 10	Russell, Frank P.
2072 7	Worden, Scott	2144 7	Morrison, Alvin A.
2076 10	Woods, Arthur F.	2146 7	Loughlin, Geo. F.
2078 8	Burrows, Arthur W.	2147 7	Perrault, Albert
2079 7	Sullivan, Wm. E.	2149 14	Jerome, Willis R.
2080 7	Ellis, Claude A.	2150 14	Brines, Samuel
2082 1	Hutchins, H. J.	2151 14	Doner, George R.
2085 12	Hansen, Hans C.	2153 14	Aitken, H. J.
2088 7	Pauls, Frederick H.	2154 3	Emersen, S. K.
2092 4	Nelson, S.	2156 3	Seiderland, F. A.
2093 4	Tufverson, N. P.	2159 4	Collins, Allen
2095 2	Warwick, Ernest W.	2160 4	Wade, Frederick J.
2096 4	McLachlan, Wm. H.	2161 4	McDonald, John J.
2097 7	Atkinson, C. L.	2162 4	Wendorf, H.
2098 11	Townsend, Chas. A.	2163 2	Thody, Fred W.
2099 3	Matson, Sigfried W.	2164 14	Mussman, A.
2102 6	Cook, Jacob F.	2165 11	Perkins, Horace L.
2103 14	Campbell, Robert	2166 3	Anderson, Herbert E.
2104 14	Auttersen, John	2167 3	Madden, John H.
2105 14	Hartman, Augustus	2168 2	Montgomery, Geo. A.
2106 14	Burk, Jos. C.	2170 6	Andrews, Andrew
2107 14	Brines, Jesse M.	2171 1	Campbell, Chas.
2111 1	Larson, John A.	2172 1	Delaney, W. F.
2115 7	Davie, D. W.	2173 12	Lyons, Geo. A.
2116 4	Hughes, Joseph	2174 12	MacLeod, Andrew R.
2117 4	Glen, Alexander	2175 12	Seeley, Harrison D.
2120 11	Roe, Stephen J.	2176 4	Tilden, L. S.
2121 3	McClintock, John	2178 14	Alexander, Robt.
2122 6	Grimm, Otto C.	2179 14	Albinson, Clarence R.

Pennant Lodge	Name	Pennant Lodge	Name
2181 12	Lewis, Frank	2282 4	DeLand, W. A.
2188 1	Phillips, James J.	2283 6	McCauley, John P.
2189 2	Stockdale, Roy N.	2284 2	Myers, George F.
2191 2	Ward, Peter	2287 12	Johns, John F.
2193 11	Cole, F. S.	2288 12	Pinney, Jesse
2194 12	Ege, Gustaf	2291 4	Johnson, Roy E.
2195 7	Littlejohn, Wm.	2293 1	Barry, Fred.
2197 7	McDonald, Fred	2297 6	Winkler, Herman
2199 4	Morrison, Wm. F.	2300 4	Levis, George
2212 6	Johnson, Oscar A.	2331 3	Emigh, Herbert W.
2213 8	Langell, Thomas	2334 12	Ditzel, Edward J.
2216 3	Peterson, Martin	2335 12	Bourassa, Albert
2218 11	Morrison, E. R.	2336 8	Lockhart, Asa
2221 12	Gunderson, G.	2337 4	Aimsbary, Walter F.
2224 10	Curran, John F.	2338 6	Tilley, Robert G.
2226 6	Kruwell, W. E. H.	2339 10	Russell, Wm. R.
2227 6	Behm, Paul	2340 3	Ferguson, James J.
2229 4	Rydholm, Carl A.	2341 4	Robinson, Frank
2230 4	Rourke, John	2343 6	Norteman, L. W.
2235 6	Fowler, Christa C.	2344 6	Tobin, Gordon
2239 4	Rinn, Charles	2347 7	Reilly, Wm. S.
2240 9	Dagon, Dennis	2350 1	Oliver, Percy
2241 2	Jamison, Alex. W.	2351 12	Ness, Martin O.
2242 1	Healy, James J.	2352 10	Lago, Thomas
2244 3	McGarity, Daniel J.	2359	Marcellias, W. C.
2245 7	Sloan, Bernard J.	2362 4	Woodford, Roy F.
2251 12	Dyrness, Ole	2364 6	Stuffelbeam, G. E.
2252 12	Hector, Fred C.	2371 4	Gardner, Chas. B.
2253 6	Petroskey, Walter	2372 4	McCarthy, Patrick
2254 4	Durkee, W. W.	2373 4	Scheible, Herman J.
2256 7	Oman, Chas. H.	2374 12	Ege, Louis
2259 2	McMartin, Frank	2376 12	Miller, Thos.
2260 6	Leisk, Henry A.	2377 4	Pizer, W. J.
2261 4	Rattray, E. Gordon	2381 3	Hillstrand, Herman
2262 4	Francis, Lawrence J.	2382 1	McKenzie, Alex.
2266	Ferguson, W. J.	2386 4	Steinman, John J.
2269	Richmond, U. G.	2387 3	Topic, Peter
2271	Nuttell, Robert E.	2388 3	Cummings, George
2278	McLeod, Norman J.	2389 14	Recor, Joseph F.
2279	Parsons, Jos. W.	2390 4	Slade, J. J.
2281	Pocock, Robert J.	2391 4	Martin, Peter J.

Pen- nant Lodge	Name	Pen- nant Lodge	Name
2395	1 Kennedy, John	2486	14 Anderson, W. M.
2397	1 Carr, James	2487	14 Lawrence, F. J.
2398	6 Quackenbush, Emmet	2488	7 Stewart, R. G.
2399	10 Gooden, Frank	2489	4 Pollock, E. H.
2400	3 Brookhyser, Geo.	2490	6 Noble, A. M.
2404	2 Hayes, John E.	2491	10 Noble, E. O.
2413	Housberger, Wm.	2492	2 May, E. W.
2417	6 Maynard, Harry W.	2493	Baylis, F. C.
2418	3 Cullnan, Patrick J.	2494	Angus, R. B.
2420	3 Napier, Harry N.	2495	2 Edwards, J. A.
2428	11 Stewart, Harvey	2496	6 Peterson, J. A.
2430	11 Haydet, Wm. F.	2498	10 Bryan, Wm. T. J.
2433	Solevy, John Henry	2499	4 Ott, Frank H.
2443	8 Baird, Leonard M.	2500	3 Anderson, Chas.
2444	8 Booth, Herman	2501	7 Emig, Edward
2447	4 Hibbard, Grant C.	2502	2 Wilson, Alex.
2450	Buchanan, John	2503	4 Frankforther, R. O
2452	7 Nielsen, John	2504	7 Rolfson, J. N.
2454	Miller, Roy McLean	2505	14 Cahours, H. J.
2455	12 Massey, J. Floyd	2506	12 Arntsen, T. A.
2456	4 Jensen, J. P.	2507	2 Currie, C. C.
2458	4 Smith, R. A.	2508	2 Currie, A. L.
2459	4 Platts, Harry	2509	4 Bourgeois, E. M.
2461	12 Hansen, Lars P.	2510	12 Weckstrom, A. W.
2462	12 Greene, Peter	2512	14 Smith, J. H.
2463	4 Davenport, Frank	2513	14 Warwick, G. A.
2464	4 LeRoy, David M.	2514	11 Smith, J. S.
2466	4 Mohr, Chas. H.	2515	Guy, John
2470	3 Hougneland, Luther	2516	12 Larsen, Jas.
2471	1 Page, Geo. H.	2517	7 Hyatt, J. H.
2472	3 Fleming, Jas. H.	2518	2 Davis, C. H.
2473	3 Ohlke, Chas. H.	2519	7 Rathburn, J. H.
2474	2 Burke, Edward C.	2520	7 Cain, Richard
2475	2 Biddlecome, Frank	2522	14 Watson, F. W.
2476	2 Crawford, R. M.	2523	4 Colson, F. A.
2478	2 Nelson, H. J.	2524	4 Goff, Edward
2479	7 McCormick, J. C	2525	3 Nelson, Robert
2480	12 O'Meara, J. H.	2526	8 Emig, A. R.
2483	4 Carsten, Chas.	2527	7 Kaminsky, G. W.
2484	14 Sawhur, W. M.	2529	10 Cody, David
2485	14 Miller, N. H.	2530	6 Bolhouse, Geo.

Pennant Lodge	Name	Pennant Lodge	Name
2531 4	Crerar, Jno.	2972 4	Buckley, H. L.
2532 3	Gustafson, Chas. A.	2973 4	Carlisle, C. C.
2533 1	Walle, Martin	2974 4	Bostwick, M. E.
2534 11	Warner, Clarence W.	2975 4	Fick, Jno. E.
2535 4	Keefe, Daniel J.	2976 4	Jones, Ralph E.
2537 3	Horton, Chas. E.	2977 6	Garland, Guy W.
2538 7	Duncan, V. W.	2978 4	Dixon, Walter J.
2539 3	Hansen, Hans A.	2979 4	Moran, Jos. S.
2940 1	Fontaine, W. C.	2980 6	Whitlock, Dana T.
2941 1	Nims, R. J.	2982 7	Lane, Wm. J.
2942 4	Munroe, A. J.	2983 4	Brown, Milton J.
2943 4	LeRoy, Thos. G.	2984 4	Scheible, Frank A.
2944 8	Kiddle, Arthur A.	2985 4	Wexler, Robert D.
2945 3	Zwemer, Geo.	2986 8	Endelman, Jno. G.
2946 6	Jackson, E. J.	2987 7	Needham, Harrison J.
2947 12	Davis, F. W.	2988 4	Downs, Chas. E.
2948 12	Weborg, I. O.	2989 12	DesJardins, Fred
2949 7	Grose, Otto M.	2990 12	Lenaghan, Geo. H.
2950 7	Grose, Edw. W.	2991 12	Saunders, Thos. H.
2951 7	Yates, George	2992 12	Everson, Harry
2952 6	Sullivan, Jere. B.	2993 12	Reinhold, Henry W.
2953 3	Berg, Isaac J.	2994 4	Plaar, Mark F.
2954 4	Cooney, Edw. J.	2995 4	Quinn, Frank W.
2955 8	Ingles, Robert	2996 4	Morton, Alfred C.
2956 8	Rouvel, Walter P.	2997 4	Starr, C. H.
2957 4	Talbot, A. J., Jr.	2998 6	Ashby, Harry
2958 14	Cushing, Jas. E.	2999 6	Hoglund, Rudolph C.
2959 14	Wolvin, Elmer B.	3000 6	Griffith, Thos. R.
2960 14	Webster, Walter M.	3001 7	Cram, Enoch
2961 4	Duddelson, J. Marshal	3002 7	Conlin, J. M.
2962 8	Rouvel, Philip E.	3003 1	Brown, David D.
2963 3	Wilson, Edward	3004 12	Johnson, Edward
2964 3	Gentz, Otto A.	3005 12	Thibideau, Frank J.
2965 4	Peterson, Frank J.	3006 12	Larson, James
2966 2	Cornell, Hart R.	3007 4	Meyers, Chas. F.
2967 3	Madden, Thos. M.	3008 4	Nunn, Arthur E.
2968 1	Kelly, Jno. W.	3009 14	Leach, Howard N.
2969 4	Hinslea, Lee C.	3010 14	Brinker, Clarence J.
2970 1	McPherson, A. J.	3011 8	Conlin, Lewis B.
2971 1	Healy, George	3012 8	Ostler, Henry

LIST OF OFFICERS SUBORDINATE LODGES.

Buffalo Lodge, No. 1—Jos. R. Acton, President; John E. Drury, 1st Vice President; Frank H. Ernest, 2nd Vice President; Frank R. Gebhard, Treasurer; Jos. M. Green, Secretary.

Port Huron Lodge, No. 2—D. M. Crooker, President, Guy Geel, 1st Vice President; Wm. Stevenson, 2nd Vice President; D. M. Sinclair, Treasurer and Secretary.

Chicago Lodge, No. 3—D. J. McGarrity, President; Jas. J. Ferguson, 1st Vice President; C. H. Wallace, 2nd Vice President; D. M. Cochrane, Treasurer; M. F. Morgan, Secretary; H. N. Napier, Chaplain, Geo. Zwemer, Marshal; Chas. Ohlke, Warden; Herman Hillstrand, Sentinel.

Cleveland Lodge, No. 4—Grant Hibbard, President; Roy Johnson, 1st Vice President; John Crerar, 2nd Vice President; L. C. Hinslea, Treasurer; C. L. Allen, Secretary.

Milwaukee Lodge, No. 6—Joseph A. Brownell, President; Chas. J. Kearns, 1st Vice President; Otto Hendricksen, 2nd Vice President; F. C. Maxon, Treasurer; Jno. McSweeney, Secretary.

Detroit Lodge, No. 7—Ed. Gatfield, President; John Hyatt, 1st Vice President; Geo. Kaminski, 2nd Vice President; B. S. Baker, Treasurer; Chas. G. Merckel, Secretary; B. F. Ogden, Chaplain; J. C. McCormick, Marshal; Chas. Ernest, Warden; Jos. Watts, Sentinel.

Marine City Lodge, No. 8—John M. Lohr, President; Jas. Cottrell, 1st Vice President; Sam'l McCann, 2nd Vice President; James Taylor, Treasurer; L. M. Baird, Secretary.

Toledo Lodge No. 9—James McKinley, President; Dennis Dagan, 1st Vice President; R. J. Pocock, 2nd Vice President; E. G. Ashley, Treasurer and Secretary.

Ogdensburg Lodge, No. 10—M. A. Leonard, President; W. T. J. Bryan, 1st Vice President; Henry Casey, 2nd Vice President; Jno. J. Powers, Treasurer and Secretary.

Algonac Lodge No. 11—S. H. Smith, President; Harvey Stewart, 1st Vice President; W. E. Warner, 2nd Vice President; Geo. Atkinson, Treasurer; Jas. P. Stewart, Secretary.

Duluth Lodge, No. 12—Jesse Pinney, President; H. D. Seeley, 1st Vice President; Geo. A. Lyons, 2nd Vice President, Albert Swenson, Treasurer and Secretary.

St. Clair Lodge No. 14—Jos. W. Auttersson, President; F. W. Watson; 1st Vice President; Jos. Rinn, 2nd Vice President; Richard O'Connor, Treasurer; Jos. C. Burk, Secretary; Fred West, Chaplain; Jesse Brines, Marshal; Henry Cahours, Warden; Wm. Morrison, Sentinel.

**TOTAL AMOUNT OF ASSESSMENTS FOR YEAR, JANUARY 25,
1919 to JANUARY 24, 1920 INCLUSIVE.**

Lodge No. 1	Buffalo	\$2722.00
Lodge No. 2	Port Huron	1622.00
Lodge No. 3	Chicago	2646.00
Lodge No. 4	Cleveland	5272.00
Lodge No. 6	Milwaukee	1940.00
Lodge No. 7	Detroit	3500.00
Lodge No. 8	Marine City	1032.00
Lodge No. 9	Toledo	590.00
Lodge No. 10	Ogdensburg	674.00
Lodge No. 11	Algonac	610.00
Lodge No. 12	Duluth	1130.00
Lodge No. 14	St. Clair	884.00
Lodge No. 16	Thunder Bay	98.00
Lodge No. 18	Toronto	82.00
		<hr/>
		\$22802.00

**LIST OF MEMBERS IN GOOD STANDING AT CLOSE OF BOOKS,
JANUARY 24, 1920.**

Lodge No. 1	Buffalo	112
Lodge No. 2	Port Huron	65
Lodge No. 3	Chicago	105
Lodge No. 4	Cleveland	224
Lodge No. 6	Milwaukee	79
Lodge No. 7	Detroit	139
Lodge No. 8	Marine City	39
Lodge No. 9	Toledo	24
Lodge No. 10	Ogdensburg	28
Lodge No. 11	Algonac	26
Lodge No. 12	Duluth	43
Lodge No. 14	St. Clair	38
Lodge No. 16	Thunder Bay	5
Lodge No. 18	Toronto	6

Obituary

Our Departed Brothers

To the Grand Lodge I. S. M. A.:

Whereas, it has pleased Our Heavenly Father in his divine wisdom to take from us our beloved brothers the past year;

Whereas, In their death our organization has lost ever useful and beloved members;

It is Hereby Resolved: That the members of this Association do extend their heartfelt sympathy to the bereaved families of our departed Brothers who were taken from them in their strong manhood.

May He who like a Father pitieth his children, comfort and sustain them in their sorrow and help them to feel and know that though their loved ones are gone from them in person, His love and protection is still with them.

Bro. A. J. McKay

Bro. G. D. Rood
Bro. W. P. McGannon
Bro. J. Doville
Bro. C. A. Benham
Bro. E. Zwemer
Bro. J. Regan
Bro. C. Mercero
Bro. C. N. Miller
Bro. C. G. Ennis
Bro. G. C. Benham

Bro. C. A. Jones
Bro. H. Woerpel
Bro. J. Stewart
Bro. F. W. Light
Bro. W. H. Humphrey
Bro. H. W. McEiven
Bro. W. E. Wright
Bro. J. S. Smith
Bro. J. F. Byers
Bro. A. A. McMaugh

When the dreams of life are fled,
When its wartell lamps are dead,
When in cold oblivious shade,
Beauty, Power and Fame are laid
Where Immortal Spirits reign,
There shall we all meet again.

Be It Further Resolved, That a copy of this resolution be spread on the minutes of this meeting.

J. A. Brownell,
S. V. Anderson,
Charles Rinn,
Committee.

In Memory

Of Brother Ship Masters who have departed this life since the Association was Organized

John A. Archer
D. M. Becker
J. P. McArthur
Thomas Collins
I. H. Andrews
John Nelson
P. J. Sexton
J. P. Hodges
John Cotton
H. J. Hatch
Edward Condon
John Condon
Thomas Riordan
James Carlisle
Benj. Chambers
Henry Ellis
John Keelin
Robert Hayes
Albert Meyers
P. G. Minch
Peter J. Kenney
A. Muir
A. W. Reed
P. Ryan
E. W. Dorsey
E. K. Porter
L. H. Weeks
P. Woods
W. E. Ladner
H. A. Sisson
H. B. Vosburg
George Scott
Thomas Maytham
E. M. Peck
S. Shannon
Jno. R. Gorman
Thos. Harbottle
James Frasier
Louis Guthrie
George W. Stoddard
Albert Meswald
D. M. Jones
James Webber
Thomas Rowley
R. E. Gain
E. J. Purcell
William Carlisle

N. Robinson
Edward Kelley
H. C. Little
Alexander Read
Smith Moore
John C. Flor
Thomas Hackett
Fred G. Boothman
John Wilson
Peter J. Girard
Eugene Winchester
John Cornish
Thomas Beniteau
Patrick Pardee
Zach Sargisson
Alpha Simons
John R. Donahue
J. B. McManus
C. S. Geel
W. H. Cowin
W. S. Mack
Byron Brown
Lorenzo W. Cook
Bernard Wilds
David Critchett
Wm. G. Turner
Robt. Moore
J. S. Lawton
J. W. Farwell
J. W. Martin
Peter Cromley
Thos. Cowan
C. A. Peltier
Thos. H. Stafford
Wm. H. Wallace
Daniel Jones
James Snell
Henry Root
Chas. W. Black
John N. Lundy
John Freer
Alvin Neal
F. J. Cadotte
J. B. Pierce
James Drake
John C. Brown
Delos Waite

John S. Van Rensler
D. H. Bryant
Peter C. Bassett
A. A. Cox
Joseph Nicholson
A. Morrison
John W. Jordan
Wm. Young
Fred N. La Salle
Albert Stewart
F. J. McCabe
James Lawless
John Hagan
John Hurley
John Leonard
Jos. L. Munger
J. W. Moore
Chas. Miner
Morton H. Place
W. H. Larrabee
J. D. Mullen
James Edgecomb
Joseph Shackett
Thomas Walker
Wm. Rolls
E. Saveland
W. H. McNelly
James Donegan
E. T. Hawley
F. D. Welcome
P. Ryan
Wm. Cumming
Wm. Hutcheson
W. R. Williams
C. T. Morley
Thos. Richardson
William Cavers
Martin Johnston
Wm. Morse
John Buie
M. W. Gotham
Henry Jeffrey
C. H. Lewis
L. H. Waterbury
J. C. Carry
A. C. Reimers
E. W. Haskins

B. C. Gray
D. A. McLaughlin
Henry Berlin
Warren Morris
W. W. Brown
J. R. Sinclair
Louis Ryerse
Wm. Dickson
Richard Neville
Charles Brown
F. W. Stanton
R. H. White
A. P. Clinton
Edmund Fitzgerald
J. Harrington
John Jenkins
John McCarthy
James Parsons
W. C. Godsell
John Coulter
J. C. Thompson
F. A. Chalcraft
Maurice Barrett
Francis Nixon
T. H. Howland
Wm. Shanks
P. A. Anderson
James Doyle
John McNeff
Joseph S. Parsons
Frank Nixon
C. M. Davis
Henry Dawson
Charles McCrea
George King
T. C. Ellis
Daniel Wall
C. B. Chatterson
James W. Millen
J. H. Green
Harry Rodgers
C. F. Moore
Albert M. Gibbs
Joseph Hulligan
George H. Flood
Robert Todd
George M. Dennis
Alex. Regg
L. P. Goodale
F. A. Wetmore
Parlane McFarlane
Thomas Jones

W. A. Irvine
David Curran
Nelson Blair
Thos. Ledden
John Robertson
W. S. Smith
Henry Bennett
S. A. Gilmore
W. Mitchell
Henry Bennett
J. W. Nicholson
S. H. Curry
C. B. Crawford
Alex. Clarke
Wm. Crawford
Dennis Driscoll
M. Fitzgeralds
F. E. Campbell
J. S. Morrison
S. A. Gilmore
Charles Christie
Hall Welmer
George McLeod
J. W. Isbester
John Beckley
Olof Christenson
Charles K. Jackson
Henry Gegoux
Wm. Furtain
Wm. Roach
M. H. Murch
C. C. Allen
Wm. J. Leaver
Chas. McIntosh
Lysander Davidson
Geo. S. Stilphen
H. W. Blue
J. B. Hocrath
Geo. F. Dayton
Ed. Smades
Elton E. Ratray
Henry May
Jas. A. Calbick
Timothy Rahill
Geo. W. Burtis
Thos. Delargie
Carlton Graves
John N. Smith
James Leitch
John Wright
Geo. Pollick

Ed. C. Copeland
Peter McCulloch
Wm. Mitchell
Paul T. Weimar
Chas. Christy
James W. Comstock
Paul Howell
James Leisk
Patrick Dowdell
Jesse G. Hurlburt
W. E. Rice
J. A. Ward
H. C. Page
Donald McLeod
Gust Olsen
Geo. Du Beau
Homer Durand
David Girardin
M. J. Galvin
T. M. Hough
Martin Niland
John S. McNeill
L. R. Vance
J. A. Landfair
Alfred Eade
T. A. Ellery
Paul V. Howell
David Kelly
T. J. Bell
James Travis
Andrew Peterson
A. W. Dwelle
Wm. McAlpine
Thomas W. Otter
J. C. Byers
C. E. Little
D. O. Bordeaux
D. F. Cleveland
John McNeil
J. D. Peterson
Joseph E. Yax
J. A. Whiteside
Fred Minor
Edward Mooney
Hugh O. Miller
Peter Wex
Hiram Still
Louis Elliott
Wm. Chamberlin
Samuel Atwood
Wm. W. Shaw

Daniel McFarlane
 Peter Kilty
 Raymond Cazellis
 Jas. P. Godman
 Wm. J. Pringle
 Jas. Hogan
 Jas. A. Brown
 Geo. A. Brown
 Walter R. Brown
 John Crangle
 John McAvoy
 Samuel N. Murphy
 John Wilkinson
 Thomas Wilford
 A. A. Causley
 John McKeeghan
 H. A. Hagensen
 George E. Merritt
 Robert H. Brooks
 John Atwell
 Robert A. Lyons
 John C. Shaw
 James Bruce
 John Murray
 John A. Johnson
 John L. Griffin
 Robert J. Cowley
 William Gerlach
 George U. Wilson
 William T. Young
 Frank Freshette
 T. J. Stephens
 I. I. Wulkie
 Nelson Little
 T. Lemay
 Peter Young
 E. B. Shay
 B. Moshier
 George McCullagh
 Wm. H. Hoffman
 D. A. Klah
 C. E. Sayre
 A. J. Kotcher
 D. C. Carrier
 H. Shackett
 F. A. Goodell
 J. F. Vaughn
 D. McFarlane
 A. Sinclair
 F. B. Higgle

W. H. Decker
 P. Gutch
 R. E. Byrns
 G. Phillips
 C. A. Hartman, Jr.
 E. Morton
 J. L. Owen
 F. C. Watson
 W. A. Black
 R. Rowan
 A. Sommers
 E. A. Hill
 C. R. Ney
 Peter Peterson
 P. Kelley
 C. T. Bronson
 J. J. Doyle
 T. J. Tyre
 A. J. Huntton
 W. G. Harrow
 J. W. Wescott
 Ed Tormey
 A. B. Miller
 James Skeldon
 W. P. Wheeler
 A. J. Grinly
 Cornelius Reilly
 H. H. Cummings
 C. W. Lockwood
 G. R. Longly
 Robt. McDowell
 Luke Willet
 James McAllister
 Frank Maltry
 J. C. Owen
 W. T. Purly
 James Gibson
 J. B. Warner
 Patrick O'Neill
 Alex. Greer
 J. P. Young
 John Disset
 J. P. Jennings
 J. R. Innes
 N. G. Kohnert
 J. W. Little
 John Massey
 D. R. Lynn
 R. H. Mosier
 Daniel Coughlin

F. C. Starke
 James T. Weaver
 John McCoy
 Wm. Fletcher
 Arthur G. Sillis
 John Perew
 Wm. Lennon
 Geo. Tebo
 Wm. H. Campau
 Jos. Sanders
 Ed. Ballentine
 Thos. Beggs
 I. B. Mansfield
 C. B. Chapman
 John Jenks
 E. Doville
 J. C. Fox
 H. Cummings
 W. D. Hamilton
 J. W. Cook
 A. Gallagher
 Edward Evans
 Fred C. Hart
 Edward July
 Harry Richardson
 Chas. R. Thrasher
 Norman McDonald
 F. H. Brown
 Richard Jollie
 Henry Davis
 C. A. Bush
 D. M. Sherwood
 George Graham
 John McArthur
 Wm. Jamieson
 John E. Cooper
 Frank S. Forton
 James M. Sanders
 Chas. D. Ross
 W. H. Blattner
 David Girardin
 C. F. VanNatta
 John W. Hall
 Berlin Sniffin
 Thos. Chron
 Harry L. Jones
 Geo. Coon
 Robert N. Bailey
 A. R. Robinson

L. G. Gillespie
A. C. May
Edward Lohr
J. C. Pringle
Wm. F. Miller
John Buzzard
Henry Bennett
Wm. H. Thorpe

A. W. Holmes
Wm. H. Johnson
Erna M. Davis
Martin Howard
J. F. Moore
P. C. Roach
Norman B. Walker
Geo. P. McKay
L. J. Friesenhan

Jos. Waltman
Robert J. Patterson
John Evans
Wm. J. McKay
James McGinn
John Steward
Stephen D. Brownell
E. P. Spear



DEATH CLAIMS PAID YEAR 1919.

Bro. E. P. Spear	\$ 1000.00
Bro. Geo. P. McKay	1000.00
Bro. N. B. Walker	1000.00
Bro. S. D. Brownell	1000.00
Bro. Jno. F. Pardee	1000.00
Bro. Geo. B. Kendall	1000.00
Bro. Jas. McGinn	1000.00
Bro. A. J. McKay	1000.00
Bro. Chas. A. Jones	1000.00
Bro. Herman Woerpel	1000.00
Bro. John Stewart	1000.00
Bro. F. W. Light	1000.00
Bro. Wm. H. Humphrey	1000.00
Bro. H. W. McEwen	1000.00
Bro. Wm. E. Wright	1000.00
Bro. John S. Smith	1000.00
Bro. John F. Byers	1000.00
Bro. A. A. McMaugh	1000.00
Bro. Geo. D. Rood	1000.00
Bro. Wm. P. McGannon	1000.00
Bro. Joseph Doville	Not Paid
Bro. Chas. A. Benham	1000.00
Bro. Everett Zwemer	1000.00
Bro. John Regan	1000.00
Bro. Chas. Marcero	1000.00
Bro. C. N. Miller	1000.00
Bro. C. G. Ennes	1000.00
Bro. Geo. C. Benham	1000.00

Total death claims paid \$27000.00

LIFE-SAVING STATIONS ON THE LAKES

Lake Ontario

Big Sandy—North side mouth of Big Sandy creek.
Oswego—East side entrance of Oswego harbor.
Charlotte—East side entrance of Charlotte harbor.
Niagara—East side entrance of Niagara river.

Lake Erie

Buffalo—South side entrance of Buffalo harbor.
Erie—North side entrance of Erie harbor.
Ashtabula—West side of Ashtabula harbor.
Fairport—West side entrance of Fairport harbor.
Cleveland—West side entrance of Cleveland harbor.
Marblehead—Point Marblehead, near quarry docks.

Lake Huron

Lake View Beach—Five miles north of Ft. Gratiot light.
Harbor Beach—Inside Harbor Beach harbor.
Point aux Barques—Near lighthouse.
Port Austin—About two miles northeast of Port Austin and about
two miles southeast of Port Austin reef light.
Tawas—Near lighthouse.
Sturgeon Point—Near lighthouse.
Thunder Bay Island—West side of island.
Middle Island—North end of the island.
Hammond—Hammond's bay.
Bois Blanc—About midway east side of island.

Lake Superior

Vermilion—Ten miles west of Whitefish Point.
Crisps—Eighteen miles west of Whitefish Point.
Two Heart River—Near mouth of Two Heart river.
Deer Park—Near mouth of Sucker river.
Grand Marais, Mich.—West of harbor entrance.
Marquette—Near lighthouse.

Portage—Old Portage Lake ship canal, three-fourth mile from
north end, on east bank.

Duluth—On Minnesota point, upper Duluth.

Lake Michigan

Beaver Island—Near lighthouse.

Charlevoix—South side of harbor entrance.

North Manitou Island—Near Pickards wharf.

South Manitou Island—Near lighthouse.

Sleeping Bear Point—Near Glen Haven.

Point Betsie—Near lighthouse.

Frankfort—South side entrance of harbor.

Manistee—North side entrance of harbor.

Grande Pointe au Sable—One mile south of light.

Ludington—North side entrance of harbor.

Pentwater—North side entrance of harbor.

White River—North side entrance of White Lake.

Muskegon—South side entrance of harbor, Port Sherman.

Grand Haven—North side entrance of harbor.

Holland—In the harbor, south side.

South Haven—North side entrance of harbor.

Saint Joseph—In the harbor, north side.

Michigan City—East side entrance of harbor.

South Chicago—North side entrance of Calumet harbor.

Jackson Park—About seven miles S. by E. of Chicago river light

Old Chicago—In the harbor.

Evanston—On the Northwestern University grounds.

Kenosha—In the harbor, on Washington Island.

Racine—In the harbor, adjoining light.

Milwaukee—Near entrance of harbor, south side.

Sheboygan—Entrance to harbor, north side.

Two Rivers—North side entrance of harbor.

Kewaunee—North side entrance of harbor.

Sturgeon Bay Canal—Eastern entrance of canal, north side.

Bailey's Harbor—On easterly side of harbor.

Plum Island—Near northeast point of island, two miles northwest of Pilot Island light.

CANALS FROM LAKES TO ATLANTIC

The Canadian canals, which have made it possible for a vessel drawing 14 ft. of water to reach the Atlantic from the lakes, are as follows, beginning down the St. Lawrence river: Lachine canal, $8\frac{1}{2}$ miles; Soulanges canal, 14 miles; Cornwall canal, 11 miles; Faran's Point canal, 1 mile; Rapid plat canal, 3 2-8 miles; Galops canal, 7 1-3 miles; Welland canal, $26\frac{3}{4}$ miles; total, 72 2-8 miles. The River St. Lawrence with the system of canals established on its course above Montreal, and the lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur at the head of Lake Superior, a distance of 2,260 statute miles. The distance to Duluth is 2,384 miles. From the Straits of Belle Isle, at the mouth of the St. Lawrence to Montreal, the distance is 986 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from 10 to 12 ft. were formerly barred from passage for the greater part of the season of navigation. In 1826 the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 ft. 6 in. By the year 1869 this depth had been increased to 20 ft., by 1882 to 25 ft., and by the close of 1888 the depth of $27\frac{1}{2}$ ft. at low water was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888 assumed the indebtedness incurred. The channel has a minimum width of 300 ft., extending to 550 ft., at points of curvature. It is lighted and buoyed.

Montreal has by this work been placed at the head of ocean navigation and here the canal systems of the River St. Lawrence begin, overcoming the various rapids by which the river channel upward is obstructed, and giving access, through the St. Lawrence canals, the Welland canal, the great lakes and the Sault Ste. Marie canal to the head of Lake Superior. The difference in level between

the point on the St. Lawrence near Three Rivers where tidal influence ceases and Lake Superior is about 600 ft. The total lockage (or height directly overcome by locks) from tide water to Lake Superior is 552 ft. The number of locks through which a vessel would pass in its passage from Montreal at the head of ocean navigation, to the head of Lake Superior, is forty-seven.

It is important to note that the enlargement of the canals on the main route between Montreal and Lake Erie comprises locks of the following minimum dimensions: Length 270 ft., width 45 ft., depth of water on sills 14 ft. The length of the vessels to be accommodated is limited to 256 ft. At Farran's point in the canal of that name the lock is 800 ft. long. A similar lock is built at Iroquois on the Galops canal, the object being to pass a full tow at one lockage.

Leading particulars of the Lachine canal are as follows: Length, $8\frac{1}{2}$ statute miles; number of locks, five; dimensions of locks, 270 ft. by 45 ft.; total rise or lockage, 45 ft.; depth of water on sills at two locks, 18 ft., and at three locks, 14 ft.; average width of new canal, 150 ft. The old lift locks, 200 ft. by 45 ft., are still available with 9 ft. of water on mitre sills. The depth of the canal between locks is now adapted to vessels of 14 ft. draught. The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two lock entrances at each end. The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of a series of rapids which bars the ascent of the river St. Lawrence.

Dimensions of the Soulanges canal are: Length of canal, 14 miles; number of locks, lift four, guard one; dimensions of locks, 280 ft. by 45 ft.; total rise on lockage, 84 ft.; depth of water on sills, 15 ft.; breadth of canal at bottom, 100 ft.; breadth of canal at water surface, 164 ft.; number of arc lights, 219 of 2,000 candle power each. The canal extends from Cascade Point to Coteau landing, overcoming the Cascade rapids, Cedar rapids and Coteau rapids.

Dimensions of the Cornwall canal are: Length of canal, 11 miles; number of locks, 6; dimensions of locks, 270 ft. by 45 ft.; total rise or lockage, 48 ft.; depth of water on sills, 14 ft.; breadth of canal at bottom, 100 ft.; breadth of canal at water surface, 164 ft. The old lift locks, 200 ft. by 45 ft., are also available with 9 ft. of water on mitre sills. From the head of the Soulanges to the foot of the Cornwall canal there is a stretch through Lake St. Francis of $32\frac{3}{4}$ miles, which is being made navigable for vessels drawing 14 ft. The Cornwall canal extends past the Long Sault rapids from the town of Cornwall to Dickenson's landing.

The Farran's point, Rapide plat and Galops canals are collectively known as the Williamsburg canals. Dimensions of the Farran's point canal are: Length of canal, one mile; number of locks, one; new lock, 800 ft. by 45 ft.; old lock, 200 ft. by 45 ft.; total rise or lockage, $3\frac{1}{2}$ ft.; depth of water on sills of new lock at ordinary water level, 14 ft.; depth of water on sills of old lock at ordinary water level, 9 ft.; breadth of canal at bottom, 90 ft.; breadth of canal at water surface, 154 ft. From the head of Cornwall canal to the foot of Farran's point canal the distance on the St. Lawrence river is five miles. The latter canal enables vessels ascending the river to avoid the Farran's point rapids passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

Particulars of the Rapide plat canal are as follows: Length of canal, 3.23 miles; number of locks, two; dimensions of locks, 270 ft. by 45 ft.; total rise or lockage, $11\frac{1}{2}$ ft.; depth of water on sills, 14 ft.; breadth of canal at bottom, 80 ft.; breadth of canal at surface of water, 152 ft. The old lift lock, 200 ft. by 45 ft., is also available with 9 ft. of water on mitre sills. From the head of Farran's point canal to the foot of Rapide plat canal there is a navigable stretch of $10\frac{1}{2}$ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

Dimensions of the Galops canal are: Length of canal, $7\frac{1}{2}$ miles; number of locks, three; dimensions of locks (two), 270 ft. by 45 ft., (one) 800 ft. by 45 ft.; total rise or lockage, $15\frac{1}{2}$ ft.; depth of water on sills, 14 ft.; breadth of canal at bottom, 80 ft.; breadth of canal at surface of water, 144 ft. From the head of Rapide plat canal to Iroquois, at the foot of the Galops canal, the St. Lawrence is navigable $4\frac{1}{2}$ miles. This canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

Dimensions of the Murray canal (extending through the Isthmus of Murray, giving connection westward between the head waters of the bay of Quinte and Lake Ontario, and thus enabling vessels to avoid the open lake navigation), are: Length between eastern and western pierheads, $5\frac{1}{2}$ miles; breadth at bottom, 80 ft.; breadth at water surface, 120 ft.; depth below lowest known lake level, 11 ft.; no locks.

The Welland canal is too well known to require extended description. Its main line runs from Port Dalhousie, Lake Ontario, to Port Colborne, Lake Erie. The Welland canal has two entrances from Lake Ontario at Port Dalhousie, one for the old and the other for the new canal. From Port Dalhousie to Allanburgh, $11\frac{1}{4}$ miles, there

are two distinct lines of canal in operation, the old line and the enlarged or new line. From Allanburgh to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

It is but just to state that considering its population and resources Canada has done vastly more for its waterways than has the United States. The sum of \$75,000,000 is mentioned as a conservative estimate of the money which the Dominion government spent in its canals before a dollar's worth of commerce could adequately utilize them. No commercial enterprise in the world can tell a similar story of faith and confidence in itself. The placing of 14 ft. as the maximum depth for the canals seems strange in the light of today; but it must be remembered that when the system of canals was designed it was supposed that a 14 ft. waterway would be ample for all time upon the great lakes. The depth which at that time vessel men were looking forward to upon the lakes was a uniform one of 12 ft. The great steel carrier was not even a dream then of the most daring of minds.

CHECKING UP COURSES

By Charles A. Benham

The following is a good and reliable method of checking up courses, when from the state of the weather or sun bearings cannot be taken, with the "polaris."

Courses On Lake Superior Using Soo River Ranges

Iroquois Pt. to Whitefish Pt.—Port $\frac{1}{8}$ point from course on head of St. Mary's river range.

Whitefish Pt. to Copper Harbor—Same as Bayfield Rock Range.

Eagle Harbor to Devil Island—Starboard $\frac{1}{4}$ point from course on St. Mary's River Lower Range.

Eagle Harbor to La Pointe—Port $\frac{5}{8}$ point from course on Pt. Aux Pins Range.

Devil Island to Duluth—Port $\frac{1}{2}$ point from course shown on Pt. Aux Pins Range.

Devil Island to Two Harbors—Port $\frac{3}{8}$ point from course shown on St. Mary's River lower range.

Whitefish Point to Passage Island—Port $\frac{1}{8}$ point from course shown with Round Island Range over stern.

Whitefish Point to Battle Island—Port $\frac{1}{8}$ point from course with Upper St. Mary's River over stern.

Whitefish Point to Pt. Au Sable—Port $\frac{1}{2}$ point from course with Vidal Shoal over stern.

Pt. Au Sable to Marquette—Starboard $\frac{1}{8}$ point from course shown with Vidal Shoal Range over stern.

Whitefish Point to Huron Island—Port $1\frac{1}{2}$ points from course shown with Vidal Shoal Range over stern.

Huron Island to Portage Entry—Port $\frac{1}{4}$ point from course shown with Vidal Shoal Range over stern.

Portage Ship Canal to Devil Island—Port $\frac{3}{8}$ point from course shown with St. Mary's River lower range over stern.

Portage Ship Canal to La Point—Port $\frac{1}{4}$ point from course shown when heading on Pt. Au Pins Range.

Passage Island to Thunder Cap—Port $\frac{1}{4}$ point from course shown with Vidal Shoal Range over stern.

Courses On Lake Huron Using "Soo" River Ranges

Detour to Middle Island—Port $\frac{1}{4}$ point from course shown with Frechette Pt. range over stern.

Middle Island to Sand Beach—Starboard $\frac{1}{8}$ point from course shown with Middle Hay Lake range over stern.

Sand Beach to Lake Huron Light Ship—Starboard $\frac{3}{8}$ point from course shown with Frying Pan and Pipe Island in range over stern.

Nine Mile Pt. to Presque Isle—Starboard $\frac{1}{2}$ point from course shown heading on Bayfield Rock range.

Detour to St. Martins Reef—Same course as steered with Vidal Shoal over stern.

St. Martin's Reef to Round Island—Port $\frac{1}{2}$ point from course shown with Vidal Shoal over stern.

Detour to Ducks—Port $\frac{1}{4}$ point from course shown heading on St. Mary's River Upper Range.

Ducks to Cove Island—Starboard $\frac{1}{8}$ point from course shown when on Bayfield Rock Range.

Poes Reef to Cove Island—Starboard $\frac{1}{8}$ point from course shown with Flower Pot and Cove Island in range ahead.

Compass Courses on Lake Michigan, Using Known Ranges

From Pt. Betsies to Chicago—Port $\frac{1}{2}$ point from course steered through No. 2 cut in West Neebish bound down.

From Door to Chicago—Starboard $\frac{1}{4}$ point from course steered through No. 2 cut in West Neebish bound down.

From Gray's Reef to North Manitou—Port $\frac{3}{8}$ point from course shown with Gray's Reef Light Vessel and White Shoal in range over stern; or starboard $\frac{1}{8}$ point from course heading on range of Chicago Water Works Crib and Chicago Pierhead.

Chicago to Pt. Betsies'—Port $\frac{3}{8}$ point from course shown with S. E., Breakwater and Chicago Water Works Crib in range over stern.

Chicago to Door—Starboard $\frac{1}{4}$ point from range of S. E. Breakwater and Chicago Water Works Crib.

From Pt. to Milwaukee—Starboard $\frac{1}{4}$ point from range of Gray's Reef and White Shoal.

Compass Courses On Lake Erie, Using Known Ranges

Buffalo to Erie—Same as range of pierhead light and town clock.

Buffalo to Fairport—Port $\frac{1}{2}$ point from above range.

Buffalo to Long Point and S. E. Shoal—Starboard $\frac{1}{4}$ point from St. Mary's River lower range.

S. E. Shoal to Middle Gd.—Port $\frac{1}{2}$ point from course on St. Mary's River upper range.

Middle Gd. to Bar Pt. Gas Buoy—Starboard $\frac{3}{4}$ point from Bayfield Rock range.

Bar Pt. to Toledo Light—Port $\frac{1}{2}$ point course on Grassy Island North Channel range.

S. E. Shoal to Cleveland—Starboard $\frac{1}{8}$ point from course on St. Mary's River upper range.

S. E. Shoal to Lorain—Port $\frac{1}{4}$ point from course shown with Frechette range over stern.

S. E. Shoal to Cleveland—Starboard $\frac{1}{8}$ point from course shown heading on St. Mary's River upper range.

S. E. Shoal to Erie—Port $\frac{1}{8}$ point from course shown when on Vidal Shoal range.

S. E. Shoal to Ashtabula—Port $\frac{3}{4}$ point from course shown when on Vidal Shoal range.

S. E. Shoal to Conneaut—Port $\frac{5}{8}$ point from course shown when on Vidal Shoal range.

AZIMUTHS—A Correction of Compass Courses

(Contributed by Mr. Arthur Dovale, Nautical Expert, Cleveland)

The United States hydrographic office recommends the use of the azimuth tables to ascertain the error of the compass as a handy method and one that will assist in relieving the masters of vessels of great responsibility. The only book absolutely necessary for working azimuths are the "Azimuth Tables" (H. O. No. 106, price 50 cents). It is also necessary to have the equation of time and the declination, which can be found in the weekly "Notices to Mariners." These notices are distributed free of charge by the branch hydrographic offices. Better than these notices, however, for working azimuths is a copy of "The Sun's Apparent Declination and Equation of Time" (H. O. No. 118, price 10 cents), as it is good for a whole year, and also has tables for reducing standard time to local mean time. The following examples will cover all cases required on the Great Lakes:

Example No. 1

We will say that we are off Duluth on August 4, 1901, in latitude $46^{\circ} 45' N.$, longitude $92^{\circ} 7' W.$, variation $8^{\circ} E.$ (The foregoing can all be found from a chart). Ship heading $E. \times N.$ We then take the bearing of the sun (by the same compass as we took the ship's heading) to be $N. 78^{\circ} 30' E.$ and note the exact time by watch, set at say 90th meridian (central standard) time and find it to be 7h. 38m., a. m.

Time of observation	7h 38m 00s	(90th meridian)
Correction for longitude—	8 28	(from table III, H. O. No. 118)
Local mean time	7 29 32	
Equation of time	— 5 55	(from table I, H. O. No. 118)
Local apparent time	7 23 37	

From table I, (H. O. No. 118) we find that the sun's declination for August 4 is $N. 17^{\circ} +$, which is of the same name as our latitude, therefore, we look for latitude 47° (as $46^{\circ} 45'$ is nearer 47° than 46°) and find it on page 107 (H. O. No. 106); then under the column marked 17° and opposite 7h 30m, we find sun's true bearing.

$= N. 94^{\circ} 25' 11''$, and opposite 7h 20m, we
 find the sun's true bearing $= N. 92^{\circ} 32' E.$
 Difference for 10 minutes $= 1^{\circ} 53' = 60' + 53' = 113'$
 Difference for 1 minute $= 11.3'$
 Difference for $3\frac{1}{2}$ minutes $= 11.3' \times 3.5 = 40'$
 Sun's true bearing for 7h 20m $= N. 92^{\circ} 32' E.$
 Correction for $3\frac{1}{2}$ minutes $= + 40$
 Sun's true bearing for 7h 23m 37s $= N. 93^{\circ} 12' E.$
 Variation $= - 8$ Ely (See note "A")
 Sun's magnetic bearing $= N. 85^{\circ} 12' E.$
 Sun's compass bearing $= N. 78^{\circ} 30' E.$
 Deviation for E. x N. course $= 6^{\circ} 42' Ely$ (See note "B")

Note "A"—Since the magnetic north is 8° east of the true north, the sun's magnetic bearing must be 8° less than its true bearing.

Note "B"—Since there are a less number of degrees and minutes from the sun's bearing to the compass north than from the sun's bearing to the magnetic north, the compass north must be to the east of the magnetic north; hence the easterly deviation. Had the compass bearing of the sun been $N. 92^{\circ} 18' E.$ then the compass north would have been $7^{\circ} 06' W.$ of the magnetic north and we would have had $7^{\circ} 06' W.$ deviation.

EXAMPLE No. 2

Off Cleveland, O., Dec. 31, 1901.

Latitude, $41^{\circ} 30' N.$, longitude, $81^{\circ} 40' W.$, variation, $2^{\circ} 11' Wly.$

Ship heading, S. S. W.; sun's bearing, N. $129^{\circ} 36' W.$; time, 3h. 20m. p. m. (90th meridian).

Time of observation... 3h 20 00s p. m.

Cor. for long. + 33 20 (from table III, H. O. No. 118)

L. M. T. 3 53 20

Eq. of time. — 2 57 (from table I, H. O. No. 118)

L. A. T. 3h 50m 23s

From table I, (H. O. No. 118) we find that the sun's declination for Dec. 31 is $S. 23^{\circ} +$, which is of opposite name to our latitude; therefore, we look on page 179, or 180, of H. O. No. 106, and in the column marked $23^{\circ} +$ at the top

and opposite 3h 50m, we find S. T. B. = N. $128^{\circ} 35' W.$

“ “ 4h 00m, we find S. T. B. = N. $126^{\circ} 49' W.$

Diff. for 10 minutes = $\frac{1^{\circ} 46'}{60} = 2^{\circ} 56'$ = $60' + 46' = 106'$

Diff. for 1 minute = $\frac{106'}{60} = 1.76'$

Diff. for 23 sec., or 2-5 minutes = $10.6 \times 2.5 = 26.5'$

so that we have, S. T. B. for 3h 50m = N. $128^{\circ} 35' W.$

Cor. for 23s = $\frac{26.5'}{60} = 0.44'$

S. T. B. for 3h 50m 23s = N. $128^{\circ} 31' W.$

Variation (see Note A) = $2^{\circ} 11' Wly.$

Sun's mag. bearing = N. $126^{\circ} 20' W.$

Sun's comp. bearing = N. $129^{\circ} 36' W.$

Dev. for course S. S. W. = $3^{\circ} 16' Ely.$

Note "A"—Since the magnetic north is $2^{\circ} 11'$ west of the true north, the sun's magnetic bearing must be $2^{\circ} 11'$ less than its true bearing.

Note "B"—Since there are a greater number of degrees and minutes from the sun to the compass north, than from the sun to the magnetic north, we have easterly deviation.

THE WIND COMPASS TO A LOW OR CYCLONE.

Compiled by Rev. F. L. Odenbach, S. J. St. Ignatius College, Cleveland,
for the Ship Masters of the Great Lakes in token of the
high esteem he has for them.

1. Cirrus (fine hair cloud, the first to show itself after fine weather) moves out of the storm on a radial line.

2. Cirro-stratus (bands of or sheets of fine fibers) moves from a direction to the Left of Cirrus.

3. Cirro-cumulus (small pellets and granulations in bands or patches) move from the left of Cirro-stratus.

4. Alto-cumulus (larger balls or plates of a white snowy appearance) move from a direction to the left of Cirro-cumulus.

5. Cumulus and Cumulus-stratus (the heavy lower clouds) cross the direction of Cirrus at a right angle.

6. The wind comes from a direction (usually more than a right angle) to the left of Cirrus, or the direction of the storm.

(a) If this system is more open and the wind nearer to 180 degrees than 90 degrees from the direction of Cirrus, the cyclone is weak.

(b) If the wind nears 90 degrees and all cloud paths are closed up, i. e. forming smaller angles with the Cirrus direction, the cyclone is a strong one.

(c) If this wind rose, or any part of it observed, shows a backing motion, you are in the northern half of the storm area.

(d) If this wind veers—you are in the southern half.

Rule 1

(a) Smoke blowing down and water finely rippled.

(b) With the Barometer rising (A High is coming on

(c) And the Temperature falling (and a Low has passed.

Rule 2

(a) Smoke rising.

(b) Temperature rising.

(c) Barometer falling.

(d) Wind from Southeast or Northeast with fog.

Shows that a Low is advancing.

With a Southeast it is North of you.

With a Northeast and fog it is South of you.

BAROMETER READINGS

This table of Barometer Readings and the weather indicated is contributed by Capt. C. W. Watson, who says that he has used it for six years and has found that nine times out of ten it can be depended upon.

Wind Barometer Tables for the Great Lakes

Height of Barometer Lake Level	Direction of Wind	Character of Wind and Weather Indicated
29.40 to 29.60 and steady	West	Fair, slight changes in Temperature, gentle to fresh winds.
29.40 to 29.60 rising	West	Fair, cooler, fresh west to northwest winds.
29.40 to 29.60 falling	South	Warmer, increasing southerly winds.
29.60 or above falling rapidly	East to South	Warmer, rain or snow within 36 hours, increasing east to southeast winds.
29.60 or above rising rapidly	West to North	Cool and clear, quickly followed by warmer variable winds.
29.60 or above steady	Variable	No immediate change but wind will go to south inside of 36 hours.
29.40 or below falling slowly	South to East	Rain or snow, increasing easterly winds.
29.40 or below falling rapidly	South to East	Rain or snow, high easterly winds, followed within 48 hours by clearing, cooler west to northwest winds.
29.40 or below rising slowly	South to West	Clearing, colder, fresh to brisk west to northwest winds.
29.20 or below falling rapidly	South to East	Severe storm of wind and rain, wind shifting to northwest within 36 hours.
29.20 or below falling rapidly	East to North	Severe northeaster, with heavy rain or snow, and winds backing to northwest.
29.20 or below rising rapidly	Going to West	Clearing and cooler, probably cold wave in winter.

CONVERSION OF GEOGRAPHICAL OR STATUTE MILES INTO NAUTICAL OR SEA MILES

Statute Mile, 5,280 ft.; Nautical Mile, 6,080 ft.

(Prepared by Capt. Henry Leisk, Milwaukee)

Geographical or statute mile	Nautical or sea mile	Geographical or statute mile	Nautical or sea mile	Geographical or statute mile	Nautical or sea mile	Geographical or statute mile	Nautical or sea mile
1.00	0.868	8.00	6.947	15.00	13.026	22.00	29.105
1.25	1.085	8.25	7.164	15.25	14.243	22.25	19.322
1.50	1.302	8.50	7.381	15.50	13.460	22.50	19.539
1.75	1.519	8.75	7.598	15.75	13.677	22.75	19.756
2.00	1.736	9.00	7.815	16.00	13.894	23.00	19.973
2.25	1.953	9.25	8.032	16.25	14.111	23.25	20.190
2.50	2.171	9.50	8.250	16.50	14.328	23.50	20.407
2.75	2.388	9.75	8.467	16.75	14.546	23.75	20.625
3.00	2.605	10.00	8.684	17.00	14.763	24.00	20.842
3.25	2.822	10.25	8.901	17.25	14.980	24.25	21.059
3.50	3.039	10.50	9.118	17.50	15.197	24.50	21.276
3.75	3.256	10.75	9.335	17.75	15.414	24.75	21.493
4.00	3.473	11.00	9.552	18.00	15.631	25.00	21.710
4.25	3.690	11.25	9.769	18.25	15.848	25.25	21.927
4.50	3.907	11.50	9.986	18.50	16.065	25.50	22.114
4.75	4.125	11.75	10.203	18.75	16.282	25.75	22.361
5.00	4.342	12.00	10.421	19.00	16.500	26.00	22.578
5.25	4.559	12.25	10.638	19.25	16.717	26.25	22.796
5.50	4.776	12.50	10.855	19.50	16.934	26.50	23.013
5.75	4.993	12.75	11.072	19.75	17.151	26.75	23.230
6.00	5.210	13.00	11.289	20.00	17.368	27.00	23.447
6.25	5.427	13.25	11.506	20.25	17.585	27.25	23.664
6.50	5.644	13.50	11.723	20.50	17.802	27.50	23.881
6.75	5.861	13.75	11.940	20.75	18.019	27.75	24.098
7.00	6.078	14.00	12.157	21.00	18.236	28.00	24.315
7.25	6.296	14.25	12.375	21.25	18.453	28.25	24.532
7.50	6.513	14.50	12.592	21.50	18.671	28.50	24.750
7.75	6.730	14.75	12.809	21.75	18.888	29.00	25.184

CONVERSION OF NAUTICAL OR SEA MILES INTO GEOGRAPHICAL OR STATUTE MILES

Statute Mile, 5,280 ft.; Nautical Mile, 6,080 ft.

(Prepared by Capt. Henry Leisk, Milwaukee)

Nautical or sea mile	Geographical or statute mile	Nautical or sea mile	Geographical or statute mile	Nautical or sea mile	Geographical or statute mile	Nautical or sea mile	Geographical or statute mile
1.00	1.151	7.00	8.060	13.00	14.969	19.00	21.878
1.25	1.439	7.25	8.348	13.25	15.257	19.25	22.166
1.50	1.729	7.50	8.636	13.50	15.545	19.50	22.454
1.75	2.015	7.75	8.924	13.75	15.833	19.75	22.742
2.00	2.303	8.00	9.212	14.00	16.121	20.00	23.030
2.25	2.590	8.25	9.500	14.25	16.409	20.25	23.318
2.50	2.878	8.50	9.787	14.50	16.696	20.50	23.606
2.75	3.166	8.75	10.075	14.75	16.984	20.75	23.893
3.00	3.454	9.00	10.393	15.00	17.272	21.00	24.181
3.25	3.742	9.25	10.675	15.25	17.560	21.25	24.469
3.50	4.230	9.50	10.939	15.50	17.848	21.50	24.757
3.75	4.318	9.75	11.227	15.75	18.136	21.75	25.045
4.00	4.606	10.00	11.515	16.00	18.424	22.00	25.333
4.25	4.893	10.25	11.803	16.25	18.712	22.25	25.621
4.50	5.181	10.50	12.090	16.50	18.999	22.50	25.909
4.75	5.469	10.75	12.378	16.75	19.287	22.75	26.196
5.00	5.757	11.00	12.666	17.00	19.575	23.00	26.484
5.25	6.045	11.25	12.954	17.25	19.863	23.25	26.772
5.50	6.333	11.50	13.242	17.50	20.151	23.50	27.060
5.75	6.621	11.75	13.530	17.75	20.439	23.75	27.348
6.00	6.909	12.00	13.818	18.00	20.727	24.00	27.636
6.25	7.196	12.25	14.106	18.25	21.015	24.25	27.924
6.50	7.484	12.50	14.393	18.50	21.303	24.50	28.212
6.75	7.772	12.75	14.681	18.75	21.590	25.00	28.787

UNITED STATES HYDROGRAPHIC OFFICE

The United States Hydrographic office, navy department, Washington, D. C., maintains branch offices on the great lakes as follows: Buffalo, Post Office Building; Sault Ste. Marie, 17 Federal Building; Duluth, 1001 Torrey Building; Chicago, Federal Building.

Masters of vessels are invited to call on arrival in port. Nautical charts and sailing directions on hand for inspection by the shipping public. Information affecting nautical charts regularly received. Nautical inquiries are investigated and answered. "Notices to Mariners," "U. S. Light Lists," and other periodical publications are distributed. Barometers are compared. All services are free.

Captains are earnestly requested to cooperate with the branch hydrographic offices in their work of collecting and distributing information useful to lake marines, by sending to them reports of buoys adrift, lights or gas buoys not lighted, shoals, wrecks, or any other dangers to navigation.

CARRYING MEMBERS AS MATÉS

The following resolution presented by Marine City Lodge was adopted by the Grand Lodge Ship Masters' Association, at its annual meeting in Buffalo, January, 1910:

Whereas, Several members of this Association serve in the capacity of mate during the sailing season.

Therefore, Be it Resolved, That members who are masters of ships, when in need of a mate, give a member of this Association the preference when it can be done, all things being equal.

SIGNALS—DECK AND ENGINE ROOM

Rules and regulations of the United States steamboat inspection service relating to starting, stopping and backing signals for the

Great Lakes provide that there shall be used between the master or pilot and engineer the following code of signals, to be made by bell or whistle, namely:

1 whistle or 1 bell	Go ahead
1 whistle or 1 bell	Stop
2 whistles or 2 bells	Back
3 whistles or 3 bells	Check
4 whistles or 4 bells	Strong
4 whistles or 4 bells	All right

Two whistles or two bells shall always mean back, irrespective of other signals previously given.

WIND SIGNALS ON LAKE SUPERIOR

Winds expected for the western end of Lake Superior are announced by whistle signals of the United States weather bureau. Signals are blown daily at 10 a. m. by the whistle of elevator "E," Duluth, Minn. The Imperial Mills, Duluth, Minn., also blow these signals at 10 p. m. during the navigation season, whenever the information then at hand is of special importance to vesselmen.

Force of Wind—Light (1 to 5 miles per hour) 1 long whistle; fresh (6 to 14 miles per hour), 2 long whistles; brisk (15 to 24 miles per hour), 3 long whistles; high (25 miles and upwards per hour), 4 long whistles; north, northeast, east, 1 short whistle; southeast, south, 2 short whistles; southwest, west, northwest, 3 short whistles; variable, 4 short whistles.

Duration of whistles: Short, 2 seconds; long, 6 seconds.

Examples: For "brisk northwest winds" there is blown first a prolonged "attention" whistle; then three long and three short whistles. For "light northeast shifting to brisk westerly winds" the "attention" whistle is blown first and then one long, one short, three long, three short.

Buffalo, N. Y.

Michigan and Ohio street bridges over Buffalo creek, South
 Michigan street bridge over City Ship (Blackwell) canal,
 Ohio basin slip bridge and Evans slip bridge 3 blasts
 Hamburg turnpike and B. C. R. R. bridges, upper end of
 city ship (Blackwell) canal 3 long 3 short
 International bridge, Niagara river 1 long
 Ferry street bridge, Black Rock harbor 3 blasts
 International bridge, Black Rock harbor 1 long

Tonawanda, N. Y.

Tonawanda island bridge and Tonawanda creek bridge.... 3 blasts

Ashtabula, O.

Ashtabula bridges; county highway and L. S. & M. S. Ry... 1 long

Cleveland, O.

L. S. & M. S. Ry. bridge 1 long 2 short
 Old River bed bridges 1 long 1 short 1 long 1 short
 Main street bridge 2 long blasts
 Superior street viaduct 3 long blasts
 Valley Ry. bridge and all others above it in the main
 river 1 long 2 short 1 long

Bridge Signals of Various Ports.**Lorain, O.**

City bridge 1 long 2 short
 N. Y. C. & St. L. Ry. bridge 3 long

Toledo, O.

All bridges in main river 3 blasts
 Dayton slip bridge long short long short
 Swan Creek—
 L. S. & M. S. Ry. and Perry street bridge.....long short long
 St. Clair street bridge 1 long 2 short

Erie street bridge	3 long
Clover Leaf Ry. bridge	3 long

Duluth, Minn.

When approaching aerial bridge over Duluth Canal	3 short
Interstate bridge	1 long 1 short 1 long
Minnesota draw, Northern Pacific bridge	1 long 2 short
Wisconsin draw, Northern Pacific bridge	2 long 2 short
Grassy Point bridge	2 short 1 long
Lamborn Ave. bridge	3 short
New Duluth transfer bridge	3 long

Chicago, Ill.

Chicago Revised Code prescribes 3 short for Chicago river and branches and Calumet river. By local custom 4 short are sounded going northward only for C. & N. W. Ry. bridge at Kinzie street and for C., M. & St. P. Ry. bridge at North avenue.

Milwaukee, Wis.

In Milwaukee 3 short whistles is the general bridge signal. There is excepted from this the bridge across the Menominee river at the foot of West Water street, and also the railroad bridge about a half block east of the West Water street bridge, as well as the bridge of the Chicago & Northwestern Ry. company across the Kinnickinnic, between Kinnickinnic avenue and Clinton street. For these exceptions the signal is four short blasts. Another exception is the Point street bridge, entrance to Green Bay canal, for which the signal is two short blasts.

Green Bay, Wis.

Fox River—

Main street	2 short 1 long
Walnut street	1 long 2 short
Mason street	1 long 1 short 1 long
Railroad and East River bridges	3 long

AN ORDINANCE

Regulating the Harbor and City Bridges in the City of Toledo
Be it Ordained by the Council of the City of Toledo, State of Ohio:

Section 1. It shall be unlawful for any person or persons to propel, or cause to be propelled, any boat on the Maumee river inside the City Limits of the City of Toledo, at a rate of speed exceeding Six Miles per hour. The provisions of this section shall not be construed as applying to passenger boats, sand-suckers or tugs. The speed of the boats herein mentioned shall not exceed Eight Miles per hour.

Section 2. It shall be unlawful for any person or persons to cause any boat to tow more than one boat at a time through any draw-bridge in the City of Toledo.

Section 3. No bridge draw shall be opened for boats that are not propelled by power, unless they are towed by a power boat.

Section 4. The provisions of Sections 1, 2 and 3 hereof shall not be construed as applying to gasoline power boats and yachts, and the provision of Section 2 hereof shall not be construed as applying to scows.

Section 5. All city bridges shall be closed to navigation from the hours of 6:30 a. m. to 7:30 a. m., and from 5 p. m. to 6 p. m.

Section 6. Any person violating any of the provisions of Section 1 or Section 2 hereof, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined not to exceed Three Hundred Dollars.

Section 7. This ordinance shall take effect and be in force from and after the earliest period allowed by law.

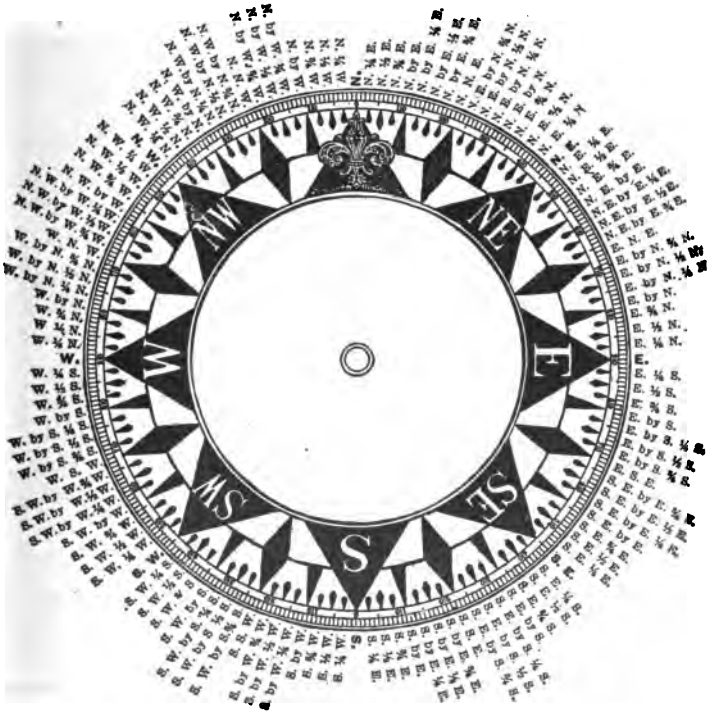
Passed May 20th, 1912.

On and after July 15th, 1912, this ordinance will be enforced by order of A. W. Boardman, Director of Public Service.

A. W. Boardman,
Director of Public Service.

John Dunseith,
Supt. of Bridges.

SHOWING EVERY POINT AND DEGREE.



THE COMPASS

The Chinese claim to have invented the Compass in the year 2634 B. C., but the earliest date that they appear to have used it at sea was about 300 A. D.

The Italians have always contended that Flavio Gioia of Amalfi, Italy, invented the Compass in the year 1342 A. D., but it has been proven that the Compass was well known as a nautical instrument long before that date.

°	POINTS	°	POINTS	°	POINTS	°	POINTS
0 00	N	45 00	NE	90 00	E	135 00	SE
0 42		45 42		90 42		135 42	
1 24	N ½ E	46 24	NE ½ E	91 24	E ½ S	136 24	SE ½ S
2 07		47 07		92 07		137 07	
2 49	N ¼ E	47 49	NE ¼ E	92 49	E ¼ S	137 49	SE ¼ S
3 31		48 31		93 31		138 31	
4 13	N ¾ E	49 13	NE ¾ E	94 13	E ¾ S	139 13	SE ¾ S
4 55		49 55		94 55		139 55	
5 38	N ½ E	50 38	NE ½ E	95 38	E ½ S	140 38	SE ½ S
6 20		51 20		96 20		141 20	
7 02	N ¼ E	52 02	NE ¼ E	97 02	E ¼ S	142 02	SE ¼ S
7 44		52 44		97 44		142 44	
8 26	N ¾ E	53 26	NE ¾ E	98 26	E ¾ S	143 26	SE ¾ S
9 08		54 08		99 08		144 08	
9 51	N ½ E	54 51	NE ½ E	99 51	E ½ S	144 51	SE ½ S
10 33		55 33		100 33		145 33	
11 15	N x E	56 15	NE x E	101 15	E x S	146 15	SE x S
11 57		56 57		101 57		146 57	
12 39	N x E ½ E	57 39	NE x E ½ E	102 39	ESE ½ E	147 39	SSE ½ E
13 22		58 22		103 22		148 22	
14 04	N x E ¼ E	59 04	NE x E ¼ E	104 04	ESE ¼ E	149 04	SSE ¼ E
14 46		59 46		104 46		149 46	
15 28	N x E ¾ E	60 28	NE x E ¾ E	105 28	ESE ¾ E	150 28	SSE ¾ E
16 10		61 10		106 10		151 10	
16 53	N x E ½ E	61 53	NE x E ½ E	106 53	ESE ½ E	151 53	SSE ½ E
17 35		62 35		107 35		152 35	
18 17	N x E ¼ E	63 17	NE x E ¼ E	108 17	ESE ¼ E	153 17	SSE ¼ E
18 59		63 59		108 59		153 59	
19 41	N x E ¾ E	64 41	NE x E ¾ E	109 41	ESE ¾ E	154 41	SSE ¾ E
20 23		65 23		110 23		155 23	
21 06	N x E ½ E	66 06	NE x E ½ E	111 06	ESE ½ E	156 06	SSE ½ E
21 48		66 48		111 48		156 48	
22 30	NNE	67 30	ENE	112 30	ESE	157 30	SSE
23 12		68 12		113 12		158 12	
23 54	NNE ½ E	68 54	ENE ½ E	113 54	SE x E ½ E	158 54	S x E ½ E
24 37		69 37		114 37		159 37	
25 19	NNE ¼ E	70 19	ENE ¼ E	115 19	SE x E ¼ E	160 19	S x E ¼ E
26 01		71 01		116 01		161 01	
26 43	NNE ¾ E	71 43	ENE ¾ E	116 43	SE x E ¾ E	161 43	S x E ¾ E
27 25		72 25		117 25		162 25	
28 08	NNE ½ E	73 08	ENE ½ E	118 08	SE x E ½ E	163 08	S x E ½ E
28 50		73 50		118 50		163 50	
29 32	NNE ¼ E	74 32	ENE ¼ E	119 32	SE x E ¼ E	164 32	S x E ¼ E
30 14		75 14		120 14		165 14	
30 56	NNE ¾ E	75 56	ENE ¾ E	120 56	SE x E ¾ E	165 56	S x E ¾ E
31 38		76 38		121 38		166 38	
32 21	NNE ½ E	77 21	ENE ½ E	122 21	SE x E ½ E	167 21	S x E ½ E
33 03		78 03		123 03		168 03	
33 45	NE x N	78 45	E x N	123 45	SE x E	168 45	S x E
34 27		79 27		124 27		169 27	
35 09	NE ¼ N	80 09	E ¼ N	125 09	SE ¼ E	170 09	S ¼ E
35 52		80 52		125 52		170 52	
36 34	NE ¾ N	81 34	E ¾ N	126 34	SE ¾ E	171 34	S ¾ E
37 16		82 16		127 16		172 16	
37 58	NE ½ N	82 58	E ½ N	127 58	SE ½ E	172 58	S ½ E
38 40		83 40		128 40		173 40	
39 23	NE ¼ N	84 23	E ¼ N	129 23	SE ¼ E	174 23	S ¼ E
40 05		85 05		130 05		175 05	
40 47	NE ¾ N	85 47	E ¾ N	130 47	SE ¾ E	175 47	S ¾ E
41 29		86 29		131 29		176 29	
42 11	NE ½ N	87 11	E ½ N	132 11	SE ½ E	177 11	S ½ E
42 53		87 53		132 53		177 53	
43 36	NE ¼ N	88 36	E ¼ N	133 36	SE ¼ E	178 36	S ¼ E
44 18		89 18		134 18		179 18	

°	POINTS	°	POINTS	°	POINTS	°	POINTS
180 00	S	225 00	SW	270 00	W	315 00	NW
180 42		225 42		270 42		315 42	
181 24	S ½ W	226 24	SW ½ W	271 24	W ½ N	316 24	NW ½ N
182 07		227 07		272 07		317 07	
182 49	S ¼ W	227 49	SW ¼ W	272 49	W ¼ N	317 49	NW ¼ N
183 31		228 31		273 31		318 31	
184 13	S ⅓ W	229 13	SW ⅓ W	274 13	W ⅓ N	319 13	NW ⅓ N
184 55		229 55		274 55		319 55	
185 38	S ¼ W	230 38	SW ¼ W	275 38	W ¼ N	320 38	NW ¼ N
186 20		231 20		276 20		321 20	
187 02	S ⅓ W	232 02	SW ⅓ W	277 02	W ⅓ N	322 02	NW ⅓ N
187 44		232 44		277 44		322 44	
188 26	S ¼ W	233 26	SW ¼ W	278 26	W ¼ N	323 26	NW ¼ N
189 08		234 08		279 08		324 08	
189 51	S ½ W	234 51	SW ½ W	279 51	W ½ N	324 51	NW ½ N
190 33		235 33		280 33		325 33	
191 15	S x W	236 15	SW x W	281 15	W x N	326 15	NW x N
191 57		236 57		281 57		326 57	
192 39	S x W ½ W	237 39	SW x W ½ W	282 39	WNW ½ W	327 39	NNW ½ W
193 22		238 22		283 22		328 22	
194 04	S x W ¼ W	239 04	SW x W ¼ W	284 04	WNW ¼ W	329 04	NNW ¼ W
194 46		239 46		284 46		329 46	
195 28	S x W ⅓ W	240 28	SW x W ⅓ W	285 28	WNW ⅓ W	330 28	NNW ⅓ W
196 10		241 10		286 10		331 10	
196 53	S x W ½ W	241 53	SW x W ½ W	286 53	WNW ½ W	331 53	NNW ½ W
197 35		242 35		287 35		332 35	
198 17	S x W ⅓ W	243 17	SW x W ⅓ W	288 17	WNW ⅓ W	333 17	NNW ⅓ W
198 59		243 59		288 59		333 59	
199 41	S x W ¼ W	244 41	SW x W ¼ W	289 41	WNW ¼ W	334 41	NNW ¼ W
200 23		245 23		290 23		335 23	
201 06	S x W ½ W	246 06	SW x W ½ W	291 06	WNW ½ W	336 06	NNW ½ W
201 48		246 48		291 48		336 48	
202 30	SSW	247 30	WSW	292 30	WNW	337 30	NNW
203 12		248 12		293 12		338 12	
203 54	SSW ½ W	248 54	WSW ½ W	293 54	NW x W ½ W	338 54	N x W ½ W
204 37		249 37		294 37		339 37	
205 19	SSW ¼ W	250 19	WSW ¼ W	295 19	NW x W ¼ W	340 19	N x W ¼ W
206 01		251 01		296 01		341 01	
206 43	SSW ⅓ W	251 43	WSW ⅓ W	296 43	NW x W ⅓ W	341 43	N x W ⅓ W
207 25		252 25		297 25		342 25	
208 08	SSW ½ W	253 08	WSW ½ W	298 08	NW x W ½ W	343 08	N x W ½ W
208 50		253 50		298 50		343 50	
209 32	SSW ⅓ W	254 32	WSW ⅓ W	299 32	NW x W ⅓ W	344 32	N x W ⅓ W
210 14		255 14		300 14		345 14	
210 56	SSW ¼ W	255 56	WSW ¼ W	300 56	NW x W ¼ W	345 56	N x W ¼ W
211 38		256 38		301 38		346 38	
212 21	SSW ½ W	257 21	WSW ½ W	302 21	NW x W ½ W	347 21	N x W ½ W
213 03		258 03		303 03		348 03	
213 45	SW x S	258 45	W x S	303 45	NW x W	348 45	N x W
214 27		259 27		304 27		349 27	
215 09	SW ⅓ S	260 09	W ⅓ S	305 09	NW ⅓ W	350 09	N ⅓ W
215 52		260 52		305 52		350 52	
216 34	SW ¼ S	261 34	W ¼ S	306 34	NW ¼ W	351 34	N ¼ W
217 16		262 16		307 16		352 16	
217 58	SW ⅓ S	262 58	W ⅓ S	307 58	NW ⅓ W	352 58	N ⅓ W
218 40		263 40		308 40		353 40	
219 23	SW ½ S	264 23	W ½ S	309 23	NW ½ W	354 23	N ½ W
220 05		265 05		310 05		355 05	
220 47	SW ⅓ S	265 47	W ⅓ S	310 47	NW ⅓ W	355 47	N ⅓ W
221 29		266 29		311 29		356 29	
222 11	SW ¼ S	267 11	W ¼ S	312 11	NW ¼ W	357 11	N ¼ W
222 53		267 53		312 53		357 53	
223 36	SW ⅓ S	268 36	W ⅓ S	313 36	NW ⅓ W	358 36	N ⅓ W
224 18		269 18		314 18		359 18	

TABLE FOR CONVERTING COMPASS COURSES INTO DEGREES, MINUTES
AND SECONDS
(A Favor from Frank Henrich, Nautical Expert, Duluth)

Points	Number	Degrees	Number	Points
North				South
	0	0	0	
	1/8	0 24	1/8	
	1/4	1 24	1/4	
	3/8	2 48	3/8	
	1/2	4 13	1/2	
	5/8	5 37	5/8	
	3/4	7 01	3/4	
	7/8	8 26	7/8	
	1	9 50	1	
	1/8	11 15	1/8	
	1/4	12 39	1/4	
	3/8	14 03	3/8	
	1/2	15 28	1/2	
	5/8	16 52	5/8	
	3/4	18 16	3/4	
	7/8	19 41	7/8	
	2	21 05	2	
	1/8	22 30	1/8	
	3/8	23 54	3/8	
	1/2	25 18	1/2	
	5/8	26 43	5/8	
	3/4	28 07	3/4	
	7/8	29 31	7/8	
	3	30 56	3	
	1/8	32 20	1/8	
	1/4	33 45	1/4	
	3/8	35 09	3/8	
	1/2	36 33	1/2	
	5/8	37 58	5/8	
	3/4	39 22	3/4	
	7/8		7/8	
	1		1	
	1/8		1/8	
	1/4		1/4	
	3/8		3/8	
	1/2		1/2	
	5/8		5/8	
	3/4		3/4	
	7/8		7/8	
	2		2	
	1/8		1/8	
	3/8		3/8	
	1/2		1/2	
	5/8		5/8	
	3/4		3/4	
	7/8		7/8	
	3		3	
	1/8		1/8	
	1/4		1/4	
	3/8		3/8	
	1/2		1/2	
	5/8		5/8	
	3/4		3/4	
	7/8		7/8	
	1		1	
	1/8		1/8	
	1/4		1/4	
	3/8		3/8	
	1/2		1/2	
	5/8		5/8	
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COMPARATIVE FREIGHT RATES—GRAIN PER BUSHEL, IRON ORE PER GROSS TON

Rate in cents per bushel	Equivalent in Iron Ore Per Gross Ton			
	Corn, flax and rye 56 pounds per bushel, 40 bushels per gross ton	Wheat 60 pounds per bushel, 37 1-3 bushels per gross ton	Barley 48 pounds per bushel, 46 2-3 bushels per gross ton	Oats 32 pounds per bushel, 70 bushels per gross ton
$\frac{3}{4}$	\$ 30	\$ 28	\$ 35	\$ 52½
$\frac{7}{8}$	35	32⅔	40	61¼
1	40	37⅓	46	70
1⅛	45	42	52	78¾
1¼	50	46⅔	58	87½
1⅝	55	51⅓	64	96¼
1⅞	60	56	70	1 05
1⅞	65	60⅔	75	1 13¾
1¾	70	65⅓	81	1 22½
1⅞	75	70	87	1 31¼
2	80	74⅔	93	1 40
2⅛	85	79⅓	99	1 48¾
2¼	90	84	1 05	1 57½
2⅜	95	88⅔	1 10½	1 66¼

For each addit. $\frac{1}{8}$ c add	5c	$4\frac{2}{3}$ c	5 $\frac{1}{8}$ c	$8\frac{3}{4}$
$2\frac{1}{2}$	1 00	$93\frac{1}{3}$	1 $16\frac{2}{3}$	1 75
$2\frac{5}{8}$	1 05	98	1 $22\frac{1}{2}$	1 $83\frac{3}{4}$
$2\frac{3}{4}$	1 10	$1 02\frac{2}{3}$	1 $28\frac{1}{3}$	1 $92\frac{1}{2}$
$2\frac{7}{8}$	1 15	$1 07\frac{1}{3}$	1 $34\frac{1}{3}$	2 $01\frac{1}{4}$
3	1 20	1 12	1 40	2 10
$3\frac{1}{4}$	1 30	$1 21\frac{1}{3}$	1 $51\frac{2}{3}$	2 $27\frac{1}{2}$
$3\frac{1}{2}$	1 40	$1 30\frac{2}{3}$	1 $63\frac{1}{3}$	2 45
$3\frac{3}{4}$	1 50	1 40	1 75	2 $62\frac{1}{2}$
4	1 60	$1 49\frac{1}{3}$	1 $86\frac{2}{3}$	2 80
$4\frac{1}{4}$	1 70	$1 58\frac{2}{3}$	1 $98\frac{1}{3}$	2 $97\frac{1}{2}$
$4\frac{1}{2}$	1 80	1 68	2 10	3 15
$4\frac{3}{4}$	1 90	$1 77\frac{1}{3}$	2 $21\frac{1}{3}$	3 $32\frac{1}{2}$
5	2 00	$1 86\frac{2}{3}$	2 $33\frac{1}{3}$	3 50
$5\frac{1}{4}$	2 10	1 96	2 45	3 $67\frac{1}{2}$
$5\frac{1}{2}$	2 20	$2 05\frac{1}{3}$	2 $56\frac{2}{3}$	3 85
$5\frac{3}{4}$	2 30	$2 14\frac{2}{3}$	2 $68\frac{1}{3}$	4 $02\frac{1}{2}$
6	2 40	2 24	2 80	4 20
$6\frac{1}{4}$	2 50	$2 33\frac{1}{3}$	2 $91\frac{1}{3}$	4 $37\frac{1}{2}$
$6\frac{1}{2}$	2 60	$2 42\frac{2}{3}$	3 $03\frac{1}{3}$	4 55
$6\frac{3}{4}$	2 70	2 52	3 15	4 $72\frac{1}{2}$
7	2 80	$2 61\frac{1}{3}$	3 $26\frac{2}{3}$	4 90

APPROXIMATE WEIGHT AND STRENGTH OF MANILA ROPE. (Compiled by The Upson-Walton Co.)

Circumference in inches.	Diameter in inches.	Weight of 1,000 feet.	Weight of 500 feet.	Weight of 1,200 feet.	Weight per fathom.	No. of feet in one pound.	Strength of New Manila Rope.
Cir.	Dia.	Lbs.	Lbs.	Lbs.	Lbs.	Ft. per Lbs.	Ft. per Lbs.
1-2 in. 6 Th'd fine ...	3-16	12	6	16	1-10	58	450
3-4 in. 6 Th'd	1-4	23	12	28	1-7	43	750
1 in. 9 Th'd	5-16	33	16	40	1-5	30	950
1 1-8 in. 12 Th'd	3-8	42	21	50	1-4	24	1,200
1 1-4 in. Th'd	7-16	52	26	62	1-3	19	1,700
1 1-2 in.	1-2	74	37	89	9-20	13 1-2	2,300
1 3-4 in.	9-16	101	50	121	3-5	10	3,000
2 in.	5-8	132	66	158	4-5	7 1-2	3,900
2 1-4 in.	3-4	167	83	200	1	6	4,700
2 1-2 in.	13-16	207	103	250	1 1-4	5	5,700
2 3-4 in.	7-8	250	125	300	1 1-2	4	6,750
3 in.	1	297	150	356	1 4-5	3 1-3	7,900
3 1-4 in.	1 1-16	349	175	420	2 1-10	2 7-8	9,200
3 1-2 in.	1 1-8	405	202	486	2 9-20	2 1-2	10,600
3 3-4 in.	1 1-4	465	232	558	2 4-5	2 1-6	12,000
4 in.	1 5-16	529	265	635	3 1-6	1 9-10	13,500
4 1-4 in.	1 3-8	597	298	716	3 3-5	1 2-3	15,250
4 1-2 in.	1 7-16	669	335	802	4	1 1-2	16,900
4 3-4 in.	1 1-2	746	373	895	4 1-2	1 1-3	18,750
5 in.	1 5-8	826	413	992	5	1 1-5	22,700
5 1-2 in.	1 3-4	1,000	500	1,200	6	1	27,000
						In.	
6 in.	1 7-8	1,190	595	1,428	7 1-7	10	29,300
6 1-4 in.	2	1,291	645	1,549	7 3-4	9 3-10	31,600
6 1-2 in.	2 1-8	1,397	698	1,677	8 3-8	8 3-5	36,750
7 in.	2 1-4	1,620	810	1,944	9 3-4	7 2-5	42,200
7 1-2 in.	2 3-8	1,860	930	2,232	11 1-6	6 1-2	45,600
8 in.	2 9-16	2,116	1,058	2,539	12 7-10	5 2-3	48,000
8 1-2 in.	2 3-4	2,388	1,194	2,866	14 1-3	5	54,200
9 in.	2 7-8	2,678	1,339	3,214	16 1-16	4 1-2	60,700
9 1-2 in.	3	2,983	1,492	3,580	17 9-10	4	67,700
10 in.	3 3-16	3,306	1,653	3,967	19 5-6	3 5-8	75,000

GALVANIZED STEEL WIRE HAWSERS
For Mooring, Towing and Wrecking
 (Compiled by The Upson-Walton Company)

6 x 24

6 x 24

Diameter in inches	Weight per 100 Feet	Tested to Tons	Diameter in inches	Weight per 100 Feet	Tested to Tons
$\frac{3}{4}$	75	15	$1\frac{7}{8}$	290	55
$1\frac{1}{8}$	90	19	$1\frac{1}{2}$	310	63
$\frac{7}{8}$	105	23	$1\frac{5}{8}$	360	75
1	138	27	$1\frac{1}{4}$	385	77
$1\frac{1}{8}$	154	30	$1\frac{3}{4}$	425	82
$1\frac{1}{4}$	175	35	$1\frac{1}{2}$	450	88
1 3-6	193	40	$1\frac{7}{8}$	475	93
$1\frac{1}{4}$	215	45	$1\frac{1}{2}$	510	98
$1\frac{3}{8}$	260	50	2	560	115

STUD LINK ANCHOR CHAIN

(Compiled by The Upson-Walton Company.)

Size chain, inches.	Length of six links, inches.	Outside length in inches.	Outside width in inches.	Space between ends of links.	Weight per fathom, pounds.	Proof test, pounds.	Breaking strain, pounds.
$\frac{3}{8}$	18 $\frac{3}{4}$	4 $\frac{3}{8}$	2 $\frac{3}{4}$	1 $\frac{3}{8}$	34	20,250	32,000
$\frac{7}{16}$	20 $\frac{3}{4}$	4 $\frac{3}{4}$	3	1 $\frac{1}{2}$	40	23,750	36,000
$\frac{7}{8}$	21 $\frac{1}{4}$	5	3 $\frac{1}{4}$	1 $\frac{1}{2}$	44	28,000	42,000
$\frac{1}{8}$	22 $\frac{7}{8}$	5 $\frac{3}{8}$	3 $\frac{1}{2}$	1 $\frac{5}{8}$	51	31,600	48,000
1	25 $\frac{1}{4}$	5 $\frac{7}{8}$	3 $\frac{3}{4}$	1 $\frac{7}{8}$	59	36,000	54,000
1 $\frac{1}{16}$	26 $\frac{7}{8}$	6 $\frac{1}{4}$	3 $\frac{7}{8}$	2	66	40,600	62,000
1 $\frac{1}{8}$	27 $\frac{3}{4}$	6 $\frac{1}{2}$	4 $\frac{1}{8}$	2	75	45,500	70,000
1 $\frac{1}{8}$	28 $\frac{3}{8}$	6 $\frac{3}{4}$	4 $\frac{1}{4}$	2	82	50,750	76,000
1 $\frac{1}{4}$	30 $\frac{1}{4}$	7 $\frac{1}{8}$	4 $\frac{1}{2}$	2 $\frac{1}{8}$	91	56,250	86,000
1 $\frac{1}{8}$	31 $\frac{1}{8}$	7 $\frac{3}{4}$	4 $\frac{5}{8}$	2 $\frac{1}{8}$	103	62,000	94,000
1 $\frac{3}{8}$	32 $\frac{3}{4}$	7 $\frac{3}{4}$	4 $\frac{7}{8}$	2 $\frac{1}{4}$	113	68,000	102,000
1 $\frac{7}{16}$	34 $\frac{3}{8}$	8 $\frac{1}{4}$	5 $\frac{1}{8}$	2 $\frac{3}{8}$	120	74,250	112,000
1 $\frac{1}{2}$	36	8 $\frac{1}{2}$	5 $\frac{3}{8}$	2 $\frac{1}{2}$	132	81,000	118,000
1 $\frac{9}{16}$	37 $\frac{5}{8}$	8 $\frac{7}{8}$	5 $\frac{5}{8}$	2 $\frac{5}{8}$	143	87,800	124,000
1 $\frac{5}{8}$	39 $\frac{1}{4}$	9 $\frac{1}{4}$	5 $\frac{7}{8}$	2 $\frac{3}{4}$	156	95,000	134,000
1 $\frac{11}{16}$	40 $\frac{7}{8}$	9 $\frac{5}{8}$	6	2 $\frac{7}{8}$	162	102,500	144,000
1 $\frac{3}{4}$	42 $\frac{1}{2}$	10	6 $\frac{1}{4}$	3	175	110,250	156,000
1 $\frac{13}{16}$	43 $\frac{3}{8}$	10 $\frac{1}{4}$	6 $\frac{1}{2}$	3	189	118,250	166,000
1 $\frac{7}{8}$	44 $\frac{1}{4}$	10 $\frac{1}{2}$	6 $\frac{3}{4}$	3	205	126,500	178,000
1 $\frac{15}{16}$	45 $\frac{1}{8}$	10 $\frac{3}{4}$	7	3	222	135,000	190,000
2	46 $\frac{3}{4}$	11 $\frac{1}{4}$	7 $\frac{1}{4}$	3 $\frac{1}{8}$	240	144,000	202,000
2 $\frac{1}{16}$	48 $\frac{3}{8}$	11 $\frac{1}{2}$	7 $\frac{1}{2}$	3 $\frac{1}{4}$	250	153,000	216,000
2 $\frac{1}{8}$	50 $\frac{3}{4}$	12	7 $\frac{3}{4}$	3 $\frac{1}{2}$	265	162,500	228,000
2 $\frac{3}{16}$	53 $\frac{1}{8}$	12 $\frac{1}{2}$	8	3 $\frac{3}{4}$	280	172,250	242,000
2 $\frac{1}{4}$	55 $\frac{1}{2}$	13	8 $\frac{1}{4}$	4	300	182,250	256,000
2 $\frac{5}{16}$	56 $\frac{3}{8}$	13 $\frac{1}{4}$	8 $\frac{1}{2}$	4	313	192,625	271,000
2 $\frac{3}{8}$	57 $\frac{1}{4}$	13 $\frac{1}{2}$	8 $\frac{3}{4}$	4	325	203,000	286,000
2 $\frac{7}{16}$	58 $\frac{3}{8}$	13 $\frac{3}{4}$	8 $\frac{7}{8}$	4	343	214,000	301,000
2 $\frac{1}{2}$	59	14	9	4	360	225,000	316,000

WHEEL CHAINS

Table of Dimensions (Approximate)
Pitch, Proof, Breaking and Safe Working Load.
Compiled by The Upson-Walton Company.

Size-Inches ... Pitch-Distance center of one to center of next link	1-4	5-16	3-8	7-16	1-2	9-16	5-8	11-16	3-4	13-16
Outside Width	7-8	1	1 1-8	1 1-4	1 9-32	1 3-8	1 11-16	1 13-16	1 15-16	2 1-16
Outside Length	1	1 3-16	1 3-8	1 9-16	1 11-16	1 7-8	2 1-16	2 1-4	2 1-2	2 11-16
Proof Test . . .	1 1-2	1 11-16	2 1-16	2 1-4	2 3-8	2 5-8	3	3 1-4	3 1-2	3 3-4
Average Break- ing Strain . . .	1600	3400	4725	6660	8850	11070	13350	16050	18475	21500
Safe working Load	4000	6000	9000	12000	16000	20000	25000	30000	36000	42000
Average Weight per foot	1330	2000	3000	4000	5330	6660	8330	10000	12000	14000
	2-3	1 1-10	1 2-3	2 1-10	2 2-3	3 1-3	4 1-4	5	6	7

Proper Way To Measure Tarpaulins

Measure from Deck to Deck Athwartships
Deck to deck for' and Aft' amidship

WHEEL CHAINS

Table of Dimensions (Approximate)
Pitch, Proof, Breaking and Safe Working Load.
Compiled by The Upson-Walton Company.

Size-Inches ...	7.8	15-16	1	1 1-16	1 1-8	1 3-16	1 1-4	1 5-16	1 3-8	1 7-16
Pitch Distance of one to center of next link...	2 3-16	2 3-8	2 1-2	2 5-8	2 3-4	3 1-16	3 1-8	3 3-8	3 9-16	3 11-16
Outside Width	2 7-8	3 1-16	3 1-4	3 1-2	3 3-4	3 7-8	4 1-8	4 3-8	4 9-16	4 3-4
Outside Length	4	4 3-8	4 5-8	4 7-8	5 1-8	5 9-16	5 3-4	6 1-8	6 7-16	6 11-16
Proof Test	24170	29000	32600	35950	39170	43620	48000	52900	57460	63950
Average Breaking Strain	49000	55000	62500	70000	80000	88000	96000	105000	116000	126000
Safe Working Load	16330	18300	20830	23330	26660	29330	32000	35000	38630	42000
Average Weight Per foot	8	9	10 1-2	12	13 1-2	15	16 1-2	18	20	22

WHEEL CHAINS

Table of Dimensions (Approximate)
Pitch, Proof, Breaking and Safe Working Load.
Compiled by The Upson-Walton Company.

Size-Inches ... Pitch-Distance center of one to center of next	1 1-2	1 9-16	1 5-8	1 3-4	1 7-8	2	2 1-8	2 1-4	2 3-8	2 1-2
link	3 7-8	4	4 1-8	4 3-8	4 7-8	5 1-8	6 1-4	6 3-4	6 7-8	7
Outside Width	5	5 3-16	5 3-8	5 3-4	6 1-8	6 1-2	7 1-8	7 5-8	8	8 3-8
Outside Length	7	7 1-4	7 1-2	8	8 3-4	9 1-4	10 3-4	11 1-2	11 7-8	12 1-4
Proof Test	69280	76600	81960	96675	110000	120000	129000	143000	159500	180000
Average Break- ing Strain	140000	150000	160000	185000	200000	225000	253000	286000	319000	360000
Safe Working	46660	50000	53330	61630	66660	75000	77400	85800	95700	108000
Load										
Average Weight										
Per Foot . . .	24	26	28	32	37	42	47	53	59	65

DRY DOCKS OF THE GREAT LAKES—DIMENSIONS, DRAUGHT OF WATER, ETC.
(From the 1913 Edition of the Blue Book of American Shipping, Copyrighted.)

PLACE	NAME OF DOCK	LENGTH			WIDTH		Over Sill Depth
		Oversills	Gate	Top			
Ashtabula, O.	Great Lakes Engineering Works, graving dock	636	78	102	16		
Bay City, Mich.	James Davidson	415	60	100	14½		
Bay City, Mich.	James Davidson	290	42½	70	13		
Buffalo, N. Y.	Buffalo Dry Dock Co., Dock No. 1	435	55	81	16		
Buffalo, N. Y.	Buffalo Dry Dock Co., Dock No. 2	478	72	96	16		
Buffalo, N. Y.	Buffalo Dry Dock Co., Dock No. 3	621	45	65½	12½		
Buffalo, N. Y.	Empire Ship Bldg. Co.	379					
Buffalo, N. Y.	Empire Ship Bldg. Co.	372					
Chicago, Ill.	Ship Owners Dry Dock Co.						
Chicago, Ill.	Ship Owners Dry Dock Co.						
Chicago, Ill.	Ship Owners Dry Dock Co.						
Cleveland, O.	American Shipbuilding Co., Dock No. 1	536	58	88	13%		
Cleveland, O.	American Shipbuilding Co., Dock No. 2	442	48	55	16		
Cleveland, O.	American Shipbuilding Co., Dock No. 3	340	48	55	17½		
Cleveland, O.	American Shipbuilding Co., Dock No. 4	514	55	60	16½		
Collingswood, Ont.	Collingswood Shipbuilding Co., Ltd.	232	48	48	8		
Detroit, Mich.	Detroit Shipbuilding Co., Dock No. 1	232	77	91	16		
Detroit, Mich.	Detroit Shipbuilding Co., Dock No. 2	341			11 feet		
Detroit, Mich.	Walter H. Oades Marine Ry.	186			13		
Duluth, Minn.	N. Grignon, floating dock	60	60	60	9		
Ecorse, Mich.	Great Lakes Eng. Works				10		
Grand Haven, Mich.	Mechanics Dry Dock, sectional dock	75	26	26	9		
Houghton, Mich.	Joseph Croze	130	31	40	9		
Kingston, Ont.	Davis Dry Dock Co.	280	55	79	{ 14.6 low 16 high		
Kingston, Ont.	Kingston Dry Dock Co.						
Kingston, Ont.	Government Dock						
Levis, Quebec	Geo. T. Davie & Sons						
Levis, Quebec	Geo. T. Davie & Sons						
Lorain, O.	American Shipbuilding Co.	724	80	125	15		
Manistee, Mich.	Manistee Iron Works Co.						
Manitowoc, Wis.	Manitowoc Shipbuilding & Dry Dock Co., graving dock	340	45	68	13		
Manitowoc, Wis.	Manitowoc Shipbuilding & Dry Dock Co.	360		70	15		

**VESSEL TIME CARD AND DISTANCE TABLE OF LAKE PORTS
BETWEEN LAKE ERIE PORTS AND DETROIT**
Speed per hour. (Time is in hours and minutes.)

DETROIT TO	Miles	7 mi.	8 mi.	9 mi.	10 mi.	11 mi.	12 mi.	13 mi.	14 mi.	15 mi.	16 mi.
Buffalo	256	26.34	32	28.27	25.36	23.16	21.20	19.41	18.17	17.4	16
Erie	187	26.42	23.22	20.46	18.42	17	15.35	14.23	13.21	12.28	11.41
Conneaut	160	22.51	20	17.46	16	14.32	13.20	12.18	11.25	10.40	10
Ashtabula	146	20.50	18.15	16.14	14.36	13.16	12.10	11.13	10.25	9.44	9.7
Fairport	121	17.17	15.7	13.26	12.6	11	10.5	9.18	8.38	8.4	7.33
Cleveland	105	15	13.7	11.40	10.30	9.32	8.45	8.4	7.30	7	6.33
Lorain	88	12.34	11	9.46	8.48	8	7.20	6.46	6.17	5.52	5.30
Huron	78	11.8	9.45	8.40	7.48	7.5	6.30	6	5.34	5.12	4.52
Sandusky	69	9.51	8.37	7.40	6.54	6.16	5.45	5.18	4.55	4.36	4.18
Toledo	56	8	7	6.13	5.36	5.5	4.40	4.18	4	3.44	3.30

BETWEEN DETROIT AND SAULT STE. MARIE AND MACKINAW
Speed per hour. (Time is in hours and minutes.)

DETROIT TO	Miles	7 mi.	8 mi.	9 mi.	10 mi.	11 mi.	12 mi.	13 mi.	14 mi.	15 mi.	16 mi.
Sault Ste. Marie	346	49.25	43.15	38.26	34.36	31.27	28.50	26.37	24.43	23.4	21.37
Mackinaw	311	44.25	38.53	34.33	31.6	28.16	25.55	23.55	22.13	20.44	19.26

BETWEEN MACKINAW AND LAKE MICHIGAN PORTS

Speed per hour. (Time is in hours and minutes.)

MACKINAW TO	Miles	7 mi.	8 mi.	9 mi.	10 mi.	11 mi.	12 mi.	13 mi.	14 mi.	15 mi.	16 mi.
Beaunaba.....	128	18.17	16	14.13	12.48	11.38	10.40	9.50	9.8	8.32	8
Green Bay.....	198	28.17	24.45	22	19.48	18	16.30	15.13	14.8	13.12	12.22
Manitowoc.....	194	27.42	24.15	21.33	19.24	17.38	16.10	14.55	13.51	12.56	12.7
Sheboygan.....	214	30.34	26.45	23.46	21.24	19.27	17.50	16.27	15.17	14.16	13.22
Milwaukee.....	270	36.51	32.15	28.40	25.48	23.27	21.30	19.50	18.25	17.12	16.7
Racine.....	270	38.34	33.15	30.53	27.7	24.32	22.30	20.46	19.17	18	16.52
Chicago.....	323	46.8	40.22	35.53	32.18	29.21	26.55	24.50	23.4	21.32	20.11
South Chicago.....	338	48.17	42.15	37.33	33.48	30.43	28.10	26	24.8	22.32	21.7

BETWEEN SAULT STE. MARIE AND LAKE SUPERIOR PORTS

Speed per hour. (Time is in hours and minutes.)

SAULT STE. MARIE TO	Miles	7 mi.	8 mi.	9 mi.	10 mi.	11 mi.	12 mi.	13 mi.	14 mi.	15 mi.	16 mi.
Marquette.....	158	22.34	19.45	17.33	15.48	14.21	13.10	12.9	11.17	10.32	9.22
Bayfield—Washburn.....	347	49.34	43.22	38.33	34.42	31.32	28.55	26.41	24.47	23.8	21.41
Ashland—Fort Arthur.....	272	36.51	34	30.14	27.12	24.43	22.40	20.55	19.25	18.8	17
Two Harbors.....	371	53	46.22	41.13	37.6	33.43	30.55	28.32	26.30	24.44	23.1
Duluth.....	394	56.17	49.15	43.46	39.24	35.49	32.50	30.18	28.8	26.16	24.2

BOAT

SPEED
Loaded. Light.

BOAT

SPEED
Loaded. Light.

PILOT'S READY RECKONER

The Pilot's Ready Reckoner, published herewith, is copyrighted by Capt. M. G. Allen, who gave the Ship Masters' Directory permission to reproduce it.

The following table was calculated to aid pilots in ascertaining the distance a vessel on a certain course will pass an object when abeam by bearings from the course of $\frac{1}{4}$ to $7\frac{3}{4}$ points. It is calculated up to twenty miles.

It is also available to ascertain the leeway or current action to which the vessel is subject.

It will be noticed by the pilot that exactness depends upon his knowing the speed of his vessel and the time she is due abreast the object or his judgment as to the distance the vessel must run to bring the object abeam.

For example, suppose the vessel is a twelve mile boat and due abreast the object in an hour and twenty-five minutes (seventeen miles to run) and that the object bears two and a quarter points on the bow. Enter the table where the heading says "Difference between course and bearing $2\frac{1}{4}$ points" then follow down column to seventeen, opposite which is the figure 8, denoting the miles the vessel will be off the object when abeam.

To prove your calculation is correct and that your course is making good—that your vessel is not subject to the action of some unseen force such as current, or that your calculation as to leeway is correct, the bearing should be three points on the bow at twelve miles to run and four points on the bow at eight miles to run.

As another illustration, suppose the object bears $1\frac{1}{4}$ points on the bow at 16 miles to run the ship should clear by four miles, and to find if the vessel is making good the calculation and not drifting for any reason the bearing should be nearly 2 points on the bow at 10 miles to run and 3 points on the bow at 6 miles to run, $3\frac{1}{2}$ points on the bow at 5 miles to run and 4 points on the bow at 4 miles to run.

A bearing can be taken at every mile if necessary to ascertain how much influence wind or current has upon the vessel.

To Ascertain Leeway

Take a bearing of some known object and as an illustration say it is one point on the bow with fifteen miles to run to bring the vessel abreast this object. This course barring leeway would bring the vessel three miles off. Upon taking your second bearing you find the object bears one and three-quarters points on the bow at ten miles to run, showing three and a half miles off. The vessel has drifted one-half mile in going five, which according to the table would be one-half point leeway. Taking a third bearing at five miles to run the object should bear three and a half points on the bow, showing four miles off. This course uncorrected would bring the vessel four and a half miles off.

FIGURE 1.

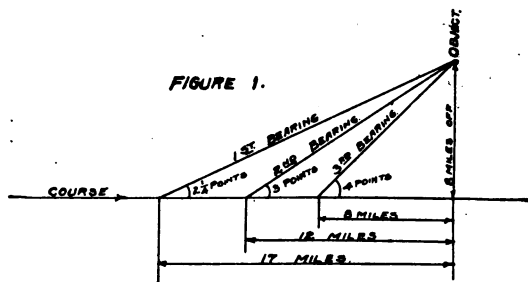


FIGURE 2.

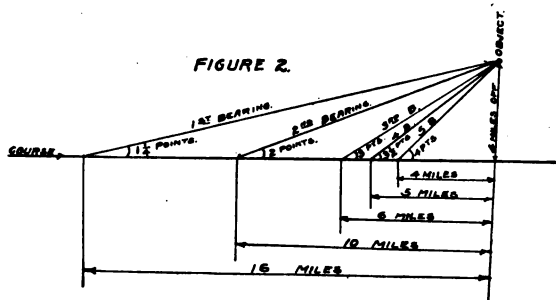
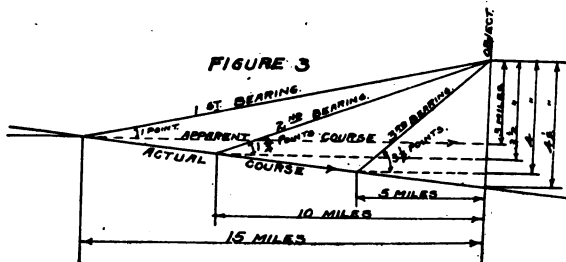


FIGURE 3



Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.	
$\frac{1}{4}$ Point		$\frac{1}{2}$ Point		$\frac{3}{4}$ Point		1 Point	
Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off
Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1	.05	1	.10	1	.15	1	.20
2	.10	2	.20	2	.30	2	.40
3	.15	3	.30	3	.45	3	.60
4	.20	4	.40	4	.60	4	.80
5	.25	5	.50	5	.75	5	1.00
6	.30	6	.60	6	.90	6	1.20
7	.35	7	.70	7	1.05	7	1.40
8	.40	8	.80	8	1.20	8	1.60
9	.45	9	.90	9	1.35	9	1.80
10	.50	10	1.00	10	1.50	10	2.00
11	.55	11	1.10	11	1.65	11	2.20
12	.60	12	1.20	12	1.80	12	2.40
13	.65	13	1.30	13	1.95	13	2.60
14	.70	14	1.40	14	2.10	14	2.80
15	.75	15	1.50	15	2.25	15	3.00
16	.80	16	1.60	16	2.40	16	3.20
17	.85	17	1.70	17	2.55	17	3.40
18	.90	18	1.80	18	2.70	18	3.60
19	.95	19	1.90	19	2.85	19	3.80
20	1.00	20	2.00	20	3.00	20	4.00

Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.	
1¼ Points		1½ Points		1¾ Points		2 Points	
Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off
Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1	.25	1	.30	1	.35	1	.41
2	.50	2	.60	2	.71	2	.82
3	.75	3	.91	3	1.06	3	1.23
4	1.00	4	1.21	4	1.42	4	1.65
5	1.25	5	1.51	5	1.78	5	2.06
6	1.50	6	1.82	6	2.13	6	2.47
7	1.76	7	2.12	7	2.49	7	2.88
8	2.01	8	2.42	8	2.84	8	3.30
9	2.26	9	2.73	9	3.20	9	3.71
10	2.51	10	3.03	10	3.56	10	4.12
11	2.76	11	3.33	11	3.91	11	4.53
12	3.01	12	3.64	12	4.27	12	4.95
13	3.26	13	3.94	13	4.62	13	5.36
14	3.52	14	4.24	14	4.98	14	5.77
15	3.77	15	4.55	15	5.34	15	6.18
16	4.02	16	4.85	16	5.69	16	6.60
17	4.27	17	5.15	17	6.05	17	7.01
18	4.52	18	5.45	18	6.40	18	7.42
19	4.77	19	5.75	19	6.76	19	7.83
20	5.03	20	6.06	20	7.12	20	8.25

Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.	
2¼ Points		2½ Points		2¾ Points		3 Points	
Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off
Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1	.5	1	.5	1	.6	1	.7
2	.9	2	1.1	2	1.2	2	1.3
3	1.4	3	1.6	3	1.8	3	2.0
4	1.9	4	2.1	4	2.4	4	2.6
5	2.3	5	2.6	5	3.0	5	3.3
6	2.8	6	3.2	6	3.6	6	4.0
7	3.3	7	3.7	7	4.1	7	4.6
8	3.8	8	4.2	8	4.7	8	5.3
9	4.2	9	4.7	9	5.3	9	6.0
10	4.7	10	5.3	10	5.9	10	6.6
11	5.2	11	5.8	11	6.5	11	7.3
12	5.7	12	6.3	12	7.1	12	8.0
13	6.1	13	6.8	13	7.7	13	8.6
14	6.6	14	7.4	14	8.3	14	9.3
15	7.1	15	7.9	15	8.9	15	10.0
16	7.5	16	8.5	16	9.5	16	10.6
17	8.0	17	9.0	17	10.1	17	11.3
18	8.5	18	9.5	18	10.7	18	12.0
19	9.0	19	10.1	19	11.3	19	12.6
20	9.4	20	10.6	20	11.9	20	13.3

Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.	
3¼ Points		3½ Points		3¾ Points		4 Points	
Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off
Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1	.7	1	.8	1	.9	1	1.
2	1.4	2	1.6	2	1.8	2	2.
3	2.2	3	2.4	3	2.7	3	3.
4	2.9	4	3.2	4	3.6	4	4.
5	3.7	5	4.0	5	4.5	5	5.
6	4.4	6	4.8	6	5.4	6	6.
7	5.2	7	5.6	7	6.3	7	7.
8	5.9	8	6.4	8	7.2	8	8.
9	6.6	9	7.3	9	8.1	9	9.
10	7.4	10	8.1	10	9.0	10	10.
11	8.1	11	8.9	11	9.9	11	11.
12	8.9	12	9.7	12	10.8	12	12.
13	9.6	13	10.5	13	11.7	13	13.
14	10.4	14	11.3	14	12.7	14	14.
15	11.1	15	12.2	15	13.6	15	15.
16	11.9	16	13.0	16	14.5	16	16.
17	12.6	17	13.8	17	15.4	17	17.
18	13.4	18	14.6	18	16.3	18	18.
19	14.1	19	15.4	19	17.2	19	19.
20	14.9	20	16.3	20	18.1	20	20.

Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.	
4¼ Points		4½ Points		4¾ Points		5 Points	
Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off
Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1	1.1	1	1.2	1	1.4	1	1.6
2	2.2	2	2.5	2	2.7	2	3.0
3	3.3	3	3.7	3	4.1	3	4.6
4	4.4	4	4.9	4	5.4	4	6.0
5	5.5	5	6.1	5	6.8	5	7.6
6	6.6	6	7.4	6	8.1	6	9.0
7	7.8	7	8.6	7	9.4	7	10.6
8	8.9	8	9.9	8	10.8	8	12.0
9	10.0	9	11.1	9	12.2	9	13.6
10	11.1	10	12.3	10	13.6	10	15.0
11	12.2	11	13.5	11	14.9	11	16.6
12	13.3	12	14.8	12	16.3	12	18.0
13	14.4	13	16.0	13	17.6	13	19.6
14	15.5	14	17.2	14	19.0	14	
15	16.6	15	18.5	15		15	
16	17.7	16	19.7	16		16	
17	18.8	17		17		17	
18	19.9	18		18		18	
19		19		19		19	
20		20		20		20	

Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.	
5¼ Points		5½ Points		5¾ Points		6 Points	
Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off
Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1	1.7	1	1.9	1	2.2	1	2.5
2	3.4	2	3.8	2	4.3	2	4.9
3	5.1	3	5.7	3	6.4	3	7.3
4	6.7	4	7.6	4	8.6	4	9.7
5	8.4	5	9.5	5	10.7	5	12.1
6	10.1	6	11.3	6	12.8	6	14.5
7	11.7	7	13.2	7	14.9	7	16.9
8	13.5	8	15.1	8	17.0	8	19.3
9	15.2	9	16.9	9	19.1	9	
10	16.8	10	18.8	10		10	
11	18.5	11		11		11	
12		12		12		12	
13		13		13		13	
14		14		14		14	
15		15		15		15	
16		16		16		16	
17		17		17		17	
18		18		18		18	
19		19		19		19	
20		20		20		20	

Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.	
6¼ Points		6½ Points		6¾ Points		7 Points	
Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off
Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1	2.8	1	3.3	1	4.	1	5.
2	5.6	2	6.6	2	8.	2	10.
3	8.4	3	9.9	3	12.	3	15.
4	11.2	4	13.2	4	15.9	4	20.
5	14.0	5	16.5	5	19.8	5	
6	16.8	6	19.7	6		6	
7	19.6	7					

Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.		Diff. Between Course & Bear.	
7¼ Points		7½ Points		7¾ Points			
Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off	Dist. to Run	Dist. Off
Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1	6.75	1	10.	1	20.		
2	13.50	2	20.				
3	20.00						

DETROIT RIVER POSTAL SERVICE

Regulations as Published by the Postmaster of the City of Detroit

It will be necessary for boats desiring to receive or deliver United States mail to enter the American channel, but only at the point of delivery.

The station will be located at the foot of First street, and deliveries will be made as nearly opposite that point as possible by a launch and small boats, the service being a continuous one day and night.

When telegrams from passing vessels are handed to the marine letter carrier, the amount of money accompanying same, in addition to the cost of the message, should be sufficient to attach a 2-cent postage stamp to same.

The delivery of telegrams may be had by instructing the telegraph company to attach a 2-cent stamp to the telegram, and, for immediate delivery, the addition of a special delivery stamp.

Mail for delivery from the marine postoffice should be directed to the "Marine Postoffice, Detroit, Mich.," and deliveries will be made throughout the entire period of navigation.

The signal to passing boats from the United States mail boat for delivery of mail will be one long whistle, one short whistle, one long whistle.

Signal for steam vessels wanting the mail boat to call for mail: One long whistle, one short whistle, one long whistle.

Signal for sailing vessels requiring mail boat: White flag by day, flashing bright light at night.

Signal from mail boat to large boats to check down: Three blasts of mocking' bird whistle.

Signal from row boat belonging to mail boat when approaching vessels for delivery of mail: White flag in day time, swinging bright light at night.

IMPORTANT: Letters and packages will be received from passing boats by the marine carriers for registration and a receipt issued to the senders at the time, but registered letters and parcels can not be delivered to passing boats, as the necessary identification and receipts can not be had. The addressees of such letters and parcels

are, however, duly notified by mail of their receipt, and that they will be held at the postoffice the usual time, subject to their order to forward or to deliver to some person ashore.

Money orders can also be procured through the marine carriers by following the instructions issued by the postmaster; if not provided with a copy of same, apply to the carrier.

RULES AND REGULATIONS

For Navigating Lower Detroit River

Approved by the Secretary of War, October 17, 1912

Definitions The Lower Detroit River is that portion of the Detroit River between the Mamajuda range lights and Lake Erie.

Speed under these rules shall in all cases be speed over the bottom.

These rules shall replace all rules and regulations heretofore published for navigating the Lower Detroit River.

Rule 1. No vessel of 100 gross tons or over shall navigate the Livingstone Channel at a rate of speed greater than ten statute miles per hour between its junction with the Amherstburg Channel at Ballards Reef and the Bar Point light vessel; nor the Amherstburg Channel at a rate of speed greater than twelve statute miles per hour between the south end of Bois Blanc Island and the north gas buoys at Ballards Reef, and where the width of this channel is restricted by improvements in progress, through such restricted width of channel the speed shall not exceed eight statute miles per hour.

Rule 2. Downbound freight vessels shall pass through the Livingstone Channel and enter Lake Erie via the channel west of Detroit River lighthouse. All upbound vessels shall enter Detroit River via the channel east of Detroit River lighthouse, and pass through the Amherstburg Channel.

Vessels under 100 gross tons, and vessels making local stops along these routes, are exempt from this rule.

Rule 3. Passenger vessels may use the Amherstburg Channel downbound, but should they pass down through the Livingstone Channel they shall be subject to the rules governing that channel.

Rule 4. All upbound light-draft vessels and all passenger vessels using the Amherstburg Channel shall pass through the auxiliary chan-

nel to the eastward of the improved channel at Ballards Reef. This auxilliary channel is 280 ft. wide and 14.5 ft. deep at low-water datum. The depth of water in this channel is posted in the cupola of building occupied by Duff and Gatfield, marine reporters, at Texas Dock.

Rule 5. No vessel shall pass, or approach within one-quarter mile of another vessel bound in the same direction in that portion of Livingstone Channel between its junction with the Amherstburg Channel at Ballards Reef and Bar Point light vessel; nor at any other portion of either channel where the width of channel is restricted by improvements in progress.

Tugs without tows and vessels under 100 gross tons are exempt from this rule.

Rule 6. Any vessel approaching a tug with a tow moving in the same direction may pass such tow by giving a signal indicating upon which side the vessel desires to pass, and it shall be the duty of the pilot of the tug to sheer clear of the side of the channel indicated and give the passing vessel all possible room.

Rule 7. No vessel shall anchor within the limits of either channel except in distress or under stress of weather. Any vessel so anchored shall be moved as quickly as possible to such anchorage as will leave the channel clear for the passage of vessels.

Rule 8. No vessel shall tow another through any of the improved channels unless such vessel moves the tow at least five miles per hour over the bottom; and no vessel of ten gross tons or over shall navigate the improved channels under sail power alone.

Rule 9. All vessels passing dredges, drill scows, derrick scows, or other stationary plant engaged on improvements to the channels are required to slacken their speed when given a signal by three distinct blasts of the steam whistle.

Rule 10. No vessel shall pass or attempt to pass another vessel or vessels moving in the same or opposite directions at any place in Lower Detroit River, in such a position that more than two vessels will be abreast when passing.

Rule 11. Three long blasts of the steam whistle, when sounded from a patrolling vessel, will indicate that the vessel to which such signal is given is proceeding at too high a rate of speed, and such vessel must immediately moderate her speed accordingly.

Rule 12. Four long blasts of the steam whistle, when sounded from a patrolling vessel, will indicate that the vessel to which such signal is given must stop until further orders from the patrolling vessel.

Rule 13. One long blast followed by four short blasts, when sounded from a patrolling vessel, will indicate that the vessel to which such signal is given may proceed on her course.

Rule 14. A vessel aground in or near a channel, or a vessel which from any accident is not under command, shall show from sunset to sunrise, at a height of not less than twenty feet nor more than forty feet above the hull, two lights in a vertical line one above the other and not less than six feet apart, and so fixed as to be visible to both up and downbound vessels. The upper of these lights shall be red. If the nature of the accident is such that the channel is closed, the lower of these lights shall also be red. But if the nature of the accident is such that vessels can pass in safety, the lower of these lights shall be white.

Such vessel shall not show the lights required for a vessel at anchor.

Such vessel shall, if the accident has closed the channel, sound a signal of several short and rapid blasts of the steam whistle to any approaching vessel, whereupon the approaching vessel shall stop and repeat this signal to any vessel coming up astern of her.

But if the accident has not rendered passing unsafe, such vessel shall sound a signal of three distinct blasts to any approaching vessel, whereupon the approaching vessel shall answer with the same signal of three distinct blasts and shall reduce her speed and pass with caution.

Such vessel shall in no case give or answer a passing signal without first giving several short and rapid blasts of the steam whistle.

It shall be the duty of the Master of the first vessel passing such vessel to report the place and nature of the accident to the next marine reporting station or patrol boat.

RULES AND REGULATIONS FOR NAVIGATING THE SAINT CLAIR RIVER, MICH., IN THE VICINITY OF STAG ISLAND

The United States Government having improved the channel to the westward of Stag Island by the removal of shoals, the following regulation is promulgated by the Secretary of War in pursuance of the provisions of Section 4 of the river and harbor act of August 18, 1894, as amended by Section 11 of the river and harbor act of June 13, 1902.

All through-bound vessels in passing through the river at this point shall keep to the right, that is to say, all up-bound boats shall pass through the eastern channel and all down-bound boats through the western channel.

This rule shall only apply to through-bound vessels and not to vessels running between local points on the river, which vessels may take either channel, conforming to the ordinary rules of the road at sea.

ROBERT SHAW OLIVER,
Assistant Secretary of War.

War Department, January 8, 1907.

The following regulation governing the speed of vessels navigating the St. Clair river in front of Sarnia has been approved by both the United States and Dominion Governments:

The speed of vessels navigating the waters of St. Clair river in front of the city of Sarnia shall not exceed nine miles per hour.

The city limits of Sarnia extend from just below the international tunnel to about opposite Bay Point.

War Department, Sept. 16, 1909.

The Canadian Government have concurred in the foregoing regulations for the navigation of the St. Clair River.

Penalties for Violations

Every person and every corporation which shall violate such rules and regulations shall be deemed guilty of a misdemeanor and, on conviction thereof in any district court of the United States within whose territorial jurisdiction such offense may have been committed, shall be punished by a fine not exceeding five hundred dollars, or by imprisonment (in case of a natural person) not exceeding six months, in the discretion of the court.

REGULATIONS FOR CHICAGO HARBOR

Ordinance passed Dec. 13th, 1909, amending Section 1016 of the Revised Municipal Code of Chicago of 1905, as follows:

Section 1016. Steam Tugs for Vessels—Penalty. All vessels, craft or floats not propelled by steam, navigating the harbor for which the opening of any bridge may be necessary, shall, while approaching and passing such bridge be towed by a steam tug. Any steam boat, vessel, craft or float propelled by steam of twelve hundred (1,200) tons gross burden or more, while navigating the portion of the Chicago River bounded by the Rush street bridge on the east, the Twelfth street bridge on the south and the Chicago avenue bridge on the north, all inclusive, shall have the assistance of a tug or tugs. It shall be unlawful for any steam boat, vessel, craft or float of twelve hundred (1,200) tons gross burden or more to back through any bridge draw in the Chicago River or the Calumet River within the limits of the City of Chicago without the assistance of a tug or tugs Page 2139 Council Proceedings.

The mayor of Chicago has suspended this ordinance pending court decision on litigation so that it is not obligatory on a vessel master to take a tug on the Chicago river unless he thinks it necessary to do so.

RULES FOR THE SAINT MARY'S RIVER

Rule 1. These rules shall apply to the waters of Saint Mary's River from Point Iroquois on Lake Superior to Point Detour on Lake Huron, except those waters included in the Saint Mary's Falls Canals.

Speed under these rules shall in all cases be speed over the bottom.

Rule 2. No vessel of 500 gross tons or over shall navigate the Saint Mary's River at a rate of speed greater than ten statute miles per hour between Everen's Point and the float lights in Hay Lake marking the northern end of the Middle Neebish Channel, nor between the post lights in Hay Lake and in Mud Lake marking the upper and lower ends, respectively, of the West Neebish Channel, nor be-

tween Six Mile Point Rear Light and the intersection of Cedar Point and Birch Point Ranges.

Rule 3. No vessel of 500 gross tons or over shall pass up the West Neebish Channel nor down the Middle Neebish Channel except vessels making a regular local stop on these channels and vessels bound in or out of the Saint Joseph or Lake George Channels at Harwood Point.

Rule 4. No vessel shall pass, or approach within one-quarter mile of, a vessel bound in the same direction in any of those portions of the channels where speed is restricted to ten statute miles per hour except between Bayfield Rock and the Saint Mary's Falls Canals, and, for upbound vessels only, between Vidal Shoal and Black Gas Buoy No. 3, off Brush Point.

Tugs without tows and local passenger boats under 500 gross tons are exempt from this rule.

Rule 5. Any vessel approaching a tug towing a dredge or scow moving in the same direction may pass such tow by giving a signal indicating upon which side the vessel desires to pass, and it shall be the duty of the pilot of the tug to sheer clear of the side of the channel indicated and give the vessel all possible room.

Rule 6. No vessel or raft shall anchor in any of the improved channels nor off Big Point within one-quarter mile of the waterworks intake crib, except vessels in distress or under stress of weather.

Any vessel or raft so anchored shall at once shift anchorage as directed by the Supervisor of Anchorages.

Rule 7. Vessels towing, while engaged in shortening or lengthening tow lines, or dropping or making up tows; vessels mooring or unmooring, anchoring or hoisting anchor; vessels loading or discharging stores from boats alongside; and vessels awaiting supply boats are required to haul, clear of the range when possible and to permit the unobstructed passage of other vessels.

Rule 8. No vessel is allowed to tow more than one vessel through any of the improved channels unless the vessel moves the tow at least five miles per hour over the bottom; and no vessel of ten gross or over shall navigate the improved channels under sail power alone.

Rule 9. Every upbound vessel shall, when abreast of Everen's Point, sound a ten-second blast of the steam whistle, which shall be answered by any descending vessel between Dark Hole Gas Buoy and Johnston Point.

Every vessel bound down the Middle Neebish Channel shall, when abreast of Dark Hole Gas Buoy, sound a ten-second blast of the steam

whistle, which shall be answered by a like blast from any upbound vessel between Everen's Point and Johnston's Point.

Immediately after such exchange of signals the passing signals shall be exchanged.

Masters are cautioned not to sound the ten-second blast required by this rule before reaching the points named.

Rule 10. All vessels passing dredges and other vessels engaged on improvements to the channels are required to slacken their speed upon such dredge or vessel giving the signal of three distinct blasts of the steam whistle.

Rule 11. No vessel shall pass or attempt to pass another vessel or vessels moving in the same direction in such a position that more than two vessels will be abreast when passing.

Rule 12. Rafts are required to use the Old or Lake George Channel. When lying by they shall be moored clear of the channel. From Harwood Point to Mud Lake Crib Gas Buoy they will move only when and as directed by the Supervisor of Anchorages.

Rafts originating in Hay Lake shall be moved only at such times and under such conditions as the Supervisor of Anchorages may direct.

Rule 13. A vessel aground in or near a channel, or a vessel which from any accident is not under command, shall show from sunset to sunrise, at a height of not less than twenty feet nor more than forty feet above the hull, two lights in a vertical line one above the other and not less than six feet apart and so fixed as to be visible to both up and downbound vessels. The upper of these lights shall be red. If the nature of the accident is such that the channel is closed, the lower of these lights shall be red. But if the nature of the accident is such that vessels can pass in safety, the lower of these lights shall be white.

Such vessel shall not show the lights required for a vessel at anchor.

Such vessel shall, if the accident has closed the channel, sound a signal of several short and rapid blasts of the steam whistle to any approaching vessel, whereupon the approaching vessel shall stop and shall repeat this signal to any vessel coming up astern of her.

But if the accident has not rendered passing unsafe, such vessel may sound a signal of three distinct blasts to any approaching vessel, whereupon the approaching vessel shall answer with the same signal of three distinct blasts and shall reduce her speed and pass with caution.

Such vessel shall in no case give or answer a passing signal without first giving several short and rapid blasts of the steam whistle.

And it shall be the duty of the master of the first vessel passing such vessel to report the place and nature of the accident to the next lookout station, canal office, or patrol boat.

Rule 14. Whenever vessels collect in any part of the river by reason of fog, smoke, ice, or the obstruction of any of the channels, the Supervisor of Anchorages shall direct and control their anchorage and their movements through such channels as the Engineer in charge of the improvements of the Saint Mary's River may declare open and under such restrictions as to order, speed, and towage as the Engineer in charge of the improvements in the Saint Mary's River may deem necessary to facilitate and expedite the passage of commerce. Regular scheduled boats carrying passengers or mails may be advanced in order and any vessel not ready to move when directed will lose her position. All vessels are required to yield prompt and implicit obedience to the directions of the Supervisor of Anchorages.

Rule 15. The patrolling vessels of the United States Revenue-Cutter Service shall have the right of way over all other vessels.

Rule 16. Signals will be used by patrol vessels as follows:

One long blast of the steam whistle followed by one short blast calls attention of nearest patrol boat or lookout station. This signal will also be used by any vessel that wishes to speak to a patrol boat.

Three long blasts of the steam whistle will indicate that the nearest moving vessel is proceeding at too high a rate of speed, and such vessel will at once reduce her speed.

Four long blasts of the steam whistle will indicate that the nearest moving vessel must stop until further orders.

Rule 17. Day and night signals will be displayed from the signal pole at Lookout Station No. 1, Johnson's Point, as follows:

One red light by night or one red ball by day will indicate that the depth of water in the channel is below the normal, and the master of any vessel the draft of which approximates the normal depth will ascertain the depth of water existing in the channel before attempting its passage.

Two red lights by night or two red balls by day will indicate that the channel is closed to upbound vessels, and all such vessels will anchor in the order of their arrival, unless otherwise directed by the patrol boat, on the west side of the ranges from the Mill dock to Everen's Point and on the east side of the sailing lines in

Mud Lake below Mud Lake Crib Gas Buoy, and will so remain anchored as long as these signals are displayed.

Rule 18. The signal of two red lights by night or two red balls by day may be used by the patrol boats or by lookout stations other than No. 1 to signify that vessels approaching a blockaded channel must anchor where designated and so remain anchored until further instructed by a patrol boat.

Rule 19. A white light hoisted on the flagstaff of any lookout station by night or a white flag or ball hoisted under the ensign by day will signify that the lookout has instructions for passing vessels.

Rule 20. The foregoing rules shall not apply to motor boats as defined under the act of Congress approved June 9, 1910, or to sail vessels under ten gross tons.

Rule 21. In all cases where the foregoing rules are not applicable the attention of masters is directed to the Pilot Rules for the Great Lakes and their Connecting and Tributary Waters.

Complaints arising under these rules should be addressed to the "Supervisor of Anchorages, Sault Sainte Marie, Michigan."

Appeals from the assessments of fines will be accompanied by sworn statements in duplicate. They will be addressed to "The Honorable, The Secretary of Commerce and Labor," and must be forwarded through the collector of customs that assessed the fine.

These rules will take effect April 15th, 1911.

BENJ. S. CABLE,
Acting Secretary.

**RULES AND REGULATIONS IN CASE OF OBSTRUCTIONS TO
COMMERCE IN ST. MARY'S RIVER, MICHIGAN, PRESCRIBED
BY THE SECRETARY OF WAR, JANUARY 9, 1907**

Under authority of Section 4 of the River and Harbor act of August 18, 1894, as amended by Section 11 of the River and Harbor act of June 13, 1902, the following rules and regulations in case of obstructions to commerce in the St. Mary's River, Michigan, are hereby prescribed:

Whenever any boat, vessel, raft, or other water craft, shall, by reason of grounding, becoming fast in ice, or any other cause, endanger or obstruct, the free passage of vessels, the Engineer Officer in charge of the improvement of St. Mary's River, Michigan, or his duly accredited representative, is hereby authorized to take imme-

diately charge with full power to stop all vessels and direct their anchorage; to clear a channel; to designate the order in which all vessels shall proceed after the channel is opened; and to do all other things necessary and proper to facilitate and expedite the passage of commerce.

While in the performance of this duty all orders of the Engineer Officer, or his agent, shall be obeyed, and any violation of such orders will be considered a misdemeanor punishable by a fine not exceeding five hundred dollars, or by imprisonment (in the case of a natural person) not exceeding six months, in the discretion of the court, as provided in the aforesaid law.

SCHEDULE OF RUNNING TIME ST. MARY'S RIVER

	Distance Miles	Time Min.
Everen's Pt. to Encampment Crib	0.8	5
Encampment Crib to Dark Hole turn	1.6	10
Dark Hole turn to Harwood Pt. turn	3.3	20
Harwood Pt. turn to Junction Buoy No. 35	3.3	20
Junction Buoy to Float Light No. 14	2.8	17
Crib Light opposite Six Mile Pt. to Red Nun Buoy ..	1.5	9
Red Nun Buoy to Lower end Island cut	1.5	9
Lower end Island cut to North Entrance	1.5	9
North Entrance to Bayfield Shoal dyke	0.5	3
South pier west end to Big Pt.	2.3	14
Big Pt. to Brush Pt.	2.3	14
Brush Pt. to intersection of Birch Pt. and Cedar Pt. ranges	5.0	30

BOUND DOWN

Intersection of Birch Pt. and Cedar Pt. ranges to Brush Pt.	5.0	30
Brush Pt. to Big Pt.	2.3	14
Big Pt. to South pier west end	2.3	14
Bayfield Shoal dyke to North Entrance	0.5	3
North Entrance to lower end Island cut	1.5	9
Lower end Island cut to Red Nun Buoy	1.5	9
Red Nun Buoy to lower Crib Light opposite Six Mile Pt.	1.5	9
Entrance Cribs to Hay Pt. turn Crib No. 22	1.6	10
Hay Pt. turn Crib No. 22 to Lookout Station 4	4.5	27
Lookout Station 4 to Lower Gas Buoy	2.5	15
Lower Gas Buoy to Lookout Station 5	2.8	17
Lookout Station 5 to Mud Lake Cribs 1-2	1.	11

COMPASS COURSES AND DISTANCES

The following tables of corrected compass courses and distances were prepared by Frank Morrison, compass adjuster of Cleveland.

Corrected Compass Courses

Lake Erie	Course	Miles
Buffalo to Long Point	W by S $\frac{3}{4}$ S	63 $\frac{3}{4}$
Long Point to S. E. Shoal	W by S $\frac{5}{8}$ S	134
Buffalo to Erie	S W $\frac{3}{4}$ W	76 $\frac{1}{2}$
Buffalo to Ashtabula	S W by W $\frac{1}{4}$ W	117
Buffalo to Fairport	S W by W $\frac{1}{2}$	143
Fairport to Cleveland	S W $\frac{1}{2}$ W	29
Buffalo to Sandusky	S W by W $\frac{1}{8}$ W	216
Erie to S. E. Shoal	W $\frac{3}{4}$ S	126
Ashtabula to S. E. Shoal	W $\frac{1}{4}$ S	88
Fairport to S. E. Shoal	W $\frac{3}{8}$ N	62 $\frac{1}{2}$
Lorain to S. E. Shoal	N W by N	30
Sandusky to S. E. Shoal	N E by E $\frac{1}{2}$ E	

Lake Huron	Course	Miles
Fort Gratiot to Sand Beach	N $\frac{5}{8}$ W	58 $\frac{1}{2}$
Sand Beach to Tunder Bay	N by W $\frac{1}{2}$ W	87 $\frac{1}{2}$
Thunder Bay to Presque Isle	N W by N $\frac{3}{4}$ N	26 $\frac{1}{2}$
Presque Isle to Forty-Mile Point	N W by W $\frac{5}{8}$ W	47
Thence Cheboygan Light	West	8
Presque Isle to Detour	N W by N $\frac{1}{8}$ N	45
Detour to Cheboygan	S W $\frac{5}{8}$ W	30
Detour to Bois Blanc	W by S $\frac{1}{2}$ S	26 $\frac{1}{4}$
Thence to Straits of Mackinac	West	9 $\frac{3}{4}$

Lake Michigan	Course	Miles
Waugoshance to North Manitou	S W $\frac{3}{8}$ S	65 $\frac{1}{2}$
North Manitou to Point Betsey		30
Pt. Betsey to Chicago	S by W $\frac{1}{4}$ W	207
Waugoshance to Milwaukee north of Manitou	S W $\frac{3}{8}$ W	62
Thence	S W by S $\frac{3}{8}$ S	177
Waugoshance to Poverty north of Beavers	W $\frac{1}{2}$ N	14
Thence	S W by W $\frac{1}{2}$ W	58
Waugoshance to Beavers	S W $\frac{1}{2}$ W	27
Beavers to Poverty	W $\frac{1}{2}$ S	55
Chicago to the Door	N $\frac{3}{8}$ E	238
Milwaukee to the Door	N by E $\frac{1}{8}$ E	159 $\frac{1}{2}$

Straits of Mackinac	Course	Miles
Cheboygan to Mackinac	N W by W $\frac{1}{4}$ W	19
Mackinaw Point to Waugoshance	West	18 $\frac{1}{2}$

Lake Superior	Course	Miles
Iroquois to Whitefish Point	N W $\frac{3}{4}$ N	25 $\frac{1}{4}$
Whitefish Point to Sable Point	W $\frac{1}{2}$ S	56 $\frac{3}{4}$
Thence to Marquette	W by S $\frac{1}{4}$ S	60
Whitefish to Huron Island	W $\frac{1}{4}$ N	145
Thence to Portage entrance	W $\frac{1}{2}$ S	20
Whitefish Point to Copper Harbor ..	W by N $\frac{5}{8}$ N	145 $\frac{1}{2}$
Copper Harbor to Eagle Harbor	West	7
Thence	W by S	8
Eagle Harbor to Devil Isle	W by S $\frac{1}{2}$ S	124
Devil Isle to Duluth	S W by W $\frac{1}{2}$ W	68
Eagle Harbor to Two Harbors	W by S $\frac{1}{2}$ S	168
Eagle Harbor to La Point	S W by W $\frac{1}{2}$ W	5

DISTANCES

	Erie	Ashtabula	Fairport	Cleveland		Escanaba	Chicago	Marquette	Ashland	Two Harbors	Duluth
Buffalo	80	117	143	173	696	825	892	760	949	973	998
Erie	43	73	101	626	756	822	691	880	904	928
Ashtabula	27	56	585	715	781	650	839	863	887
Fairport	30	563	693	759	628	817	841	865
Cleveland	544	674	739	609	798	822	846
Escanaba	201	275	339	578	602	626
Milwaukee	83	519	708	732	755
Chicago	584	773	797	820
Marquette	279
Ashland	72	94
Two Harbors	27

Distances to Chicago are by south passage; if by middle passage add nine miles; if west passage add 17 miles to the distances to Lake Superior and Lake Erie ports.

THE USE OF THE BEARING INDICATOR

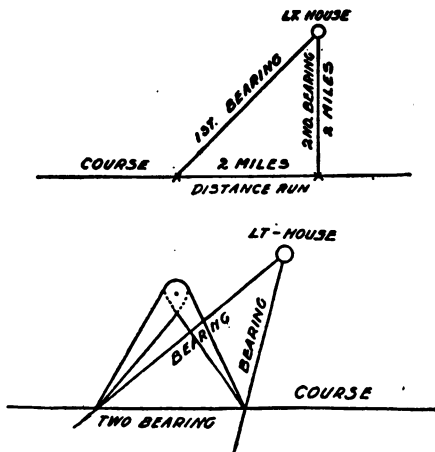
Presented with Compliments of Buffalo Lodge

- (1) How to find error of the compass by the north star.
- (2) And by the rising and setting sun.
- (3) How to obtain the distance off from a lighthouse or other known objects by bearings known as the four-point bearing, the cross bearing or the two-bearing method which are thus explained.

(1) To obtain the error of the compass by a bearing of the north star: Set the dial of the indicator same as the pilot house compass, then point the sight-bar toward the north star and the indicator will show the error at once.

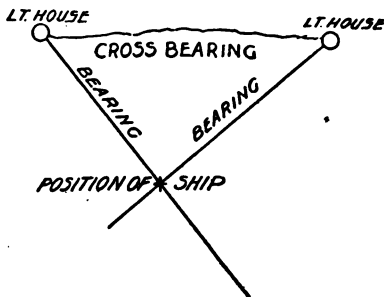
(2) By having the amplitude tables that have been published for the lake region, the error of the compass may be obtained by taking a bearing of the rising or setting sun.

The Four-Point Bearing



The four-point bearing is the most simple and easy bearing to take that will give the exact distance off a lighthouse or other known object without having to use the chart, and is taken thus: For instance, your course is N. $\frac{1}{2}$ W., set the sight-bar at N. W. $\frac{1}{2}$ W., or four (4) points of the bow; when the lighthouse or other object comes in range, note the time or log, or both, then run till the lighthouse or other object is abreast or eight (8) points of the bow, and the distance run between bearings will be the exact distance to the lighthouse.

The cross bearing is a very simple, quick and correct bearing when there are two lighthouses in view, and is taken thus: Take a bearing of each lighthouse and draw them on the chart, and where the lines cross is the position of the ship.



The two bearing method is taken thus: Take a bearing of lighthouse and draw the line on the chart, then run any distance, say a mile or two miles, then take another bearing, and draw it on the chart also, then set the dividers to the distance run, and draw it on the chart, and draw them down the bearings on the course you have been steering till one point of the dividers rests on each line, and that will be the location of the ship at each bearing.

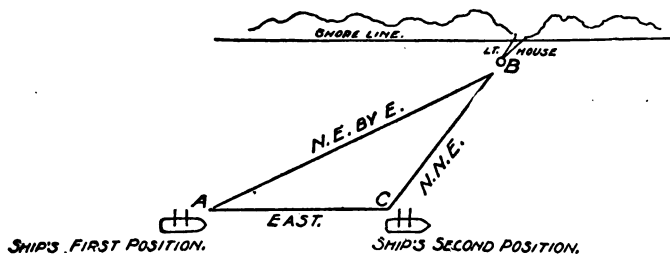
TO FIND A SHIP'S DISTANCE

From a Point of Land or a Light, Without a Table, Chart or Dividers

Submitted by Bro. F. B. Higgle

The problem is of great service when sailing along any coast and is as follows: Suppose any well known shore light bears two or three points on either bow, then let the ship keep on her course till

it bears the same number of points to the left of the first bearing; the distance the ship has run in the interval is her distance from the light at the time of taking the second bearing.



EXAMPLE

Let A be a ship steering east; B a light bearing three points on the port bow, that is, N. E. by E. She proceeds on her course till the light bears three points to the left of N. E. by E., that is N. N. E., then C. B. is equal to C. A. by 6th proposition, first book of Euclid.

RULE

Multiply the distance run in the interval between the two bearings by the number found in the table under the difference between the course and the bearing, and opposite the difference between the course and second bearing. The product is the distance at the time the second bearing was taken.

EXAMPLE—A light when first seen bore W. N. W.; distance at the time the second bearing was taken, 16 miles; after running W. S. 16 miles it bore N. $\frac{1}{2}$ W. Required this distance when second bearing was taken.

Difference between course and second bearing, $8\frac{1}{2}$ points.

Corresponding tabular number, 0.63, and 16 miles $\times 0.63 = 10.08$ miles, the distance required.

[illegible]

Difference between the course and the first bearing in points

Difference between the course the second bearing in points

-
- No. 1 Acme Sand & Gravel Co., Cleveland, Ohio.
Str. Burnham, George.
- No. 2 Algoma Central & Hudson Bay Railways. Algoma
Central Steamship Line, W. J. McCormack, Supt.
Sault Ste. Marie, Ont.
Str. Agawa.
Str. Franz, W. C.
Str. Taylor, J. Frater.
Str. Smith, Home.
- No. 3 Algoma Dredging Co., Ltd., Sault Ste. Marie, Ont.
Bge. McWilliam, Ed.
- No. 4 American Box Co., Cleveland, Ohio.
American Transit Co.
Str. Stevens, Frank B.
- No. 5 American-Interlake Co., Cleveland, Ohio.
Canada Steamship Lines, Ltd.
Str. Dawson, Sir Trevor.
Str. Stadacona.
- No. 6 Anderson, J. M., Chicago, Ill.
Schr. Carrier.
- No. 7 Anderson, Wilbur, Marinette, Wis.
Schr. Grant, Levi.
- No. 7½ Ann Arbor S. S. & Ry. Lines, R. H. Reynolds, Marine
Supt., Frankfort, Mich.
Str. Ann Arbor No. 3.
Str. Ann Arbor No. 4.
Str. Ann Arbor No. 5.
Str. Ann Arbor No. 6.
- No. 8 Argo Steamship Co., Rockefeller Bldg., Cleveland, Ohio.
Str. Argo.
- No. 9 Arnold Transportation Co., Mackinac Island, Mich.
Str. Chippewa.
Str. Elva.
Str. Islander.

- No. 10 Ashley & Dustin Steamer Line, Foot of First St., Detroit,
Mich.
Str. Kirby, Frank E.
Str. Put-in-Bay.
- No. 11 Atkinson, W. G., Whitby, Ont.
Schr. Guido.
- No. 12 Atlas Steamship Co., R. C. Helm, Mgr., Board of Trade,
Duluth, Minn.
Str. La Salle.
- No. 13 Atlas Transportation Corp., 75 Common St., Montreal,
Quebec.
Bge. Ashland.
Bge. Atlasco.
Bge. Augustus.
Bge. Hector.
Bge. Carney, Fred.
Bge. Case, J. I.
Bge. Condor.
Bge. Burma.
Bge. Ireland.
Bge. Kildonan.
Bge. Kingston.
Bge. Lapwing.
Bge. Melrose.
Bge. Menominee.
Bge. Muskoka.
Bge. Rene, J. G.
Bge. Reddington, Nellie
Bge. Selkirk.
Bge. Stephenson, Isaac
Bge. Twin Sisters.
Bge. Valencia.
Bge. Warmington, G. H.
Bge. Winnipeg.
Bge. Woodlands.
- No. 14 Atlas Sand Co., Ltd., Montreal, Canada.
Bge. Cobalt.
- No. 15 Auger & Son, Ltd., Quebec, Que.
Bge. Auger A.

- No. 16 **Barnard, Charles A.**, Montreal, Que.
Str. Shrigley, J. H.
- No. 17 **Barlum, J. J., Mgr.**, 354 Grand River Ave., Detroit, Mich.
Postal Steamship Co.
Str. Barlum, John J.
Str. Barlum, Thomas.
- No. 18 **Beaver Steamship Co., Ltd.**, Montreal, Que.
Str. Maplegrove.
- No. 19 **Becker, William H., Mgr.**, Rockfeller Bldg., Cleveland, Ohio.
Inter-State Steamship Co.
Str. Brower, A. G.
Str. Brown, W. W.
Str. Curry, S. S.
Str. Jones, B. F.
Str. King, Willis L.
Str. Laughlin, James.
Str. Miller, P. P.
Str. Walters, Thomas.
Str. Widlar, Francis.
Valley Steamship Co.
Str. Donaldson, John A.
Str. Grammer, G. J.
Str. Ohi, Edwin N.
Str. Pollock, W. G.
Str. Rhodes, Joshua W.
Str. Robbins, Francis L.
Str. Seither, Frank.
Str. Thompson, Alexis W.
- No. 20 **Benton Transit Co.**, Benton Harbor, Mich.
Str. Woods, Frank.
- No. 21 **Bielman, C. F.**, Detroit, Mich.
Str. Bielman, Jr., C. F.
- No. 22 **Blodgett, O. W.**, Lyceum Bldg., Duluth, Minn.
Str. Bradley, C. H.
Str. Ralph, P. J.
Str. Zillah.
Bge. Arthur.
Bge. Brightle,

Bge. Delaware.
Bge. Goshawk.
Bge. Holland, N. C.
Bge. Miztec.
Bge. Page, M. W.
Bge. Peshtigo.
Bge. Woolson, Mary.

No. 23 Boland, John J., Prudential Bldg., Buffalo, N. Y.
Bge. Jennette.

No. 24 Boland & Cornelius, Mgrs., Prudential Bldg., Buffalo, N. Y.
American Steamship Co.
Str. Boland, John J.
Str. Booth, Edwin L.
Str. Cornelius, Adam E.
Str. Davidson, L. R.
Str. Kopp, Jacob T.
Str. Moll, Clifford F.
Str. Reeb, M. A.
Str. Roberts, W. T.
Str. Wickwire, T. H.
Str. Wickwire, Jr., T. H.
Str. Yates, Harry.
Rochester Steamship Co.
Str. Niagara.

No. 25 Bonin, Alfred, Lanorale, Que.
Bge. Freeport.

No. 26 Booth, Edward A., Kingston, Ont.
Str. Saginaw.

No. 27 Bourasso, Jas., Houghton, Mich.
Str. Hayes, R. B.

No. 28 Boynton, L. R., Mgr., St. Ignace, Mich.
Island Transportation Co.
Str. Algomah.
Str. Wau-Kon.
Str. Chief Wawatam.

No. 29 Bradley, Carl D., Mgr., Rogers City, Mich.
Bradley Transportation Co.
Str. Bradley, Carl D.

Limestone Transportation Co.
Str. White, W. F.

- No. 30 **Brady Bros., N. Tonawanda, N. Y.**
Str. United Lumberman.
- No. 31 **British Colonies Transportation Co., Ltd., Toronto, Ont.**
Sch. Goldman, Celina K.
- No. 32 **Brown & Co., Mgrs., Chamber of Commerce, Buffalo, N. Y.**
Brown Steamship Co.
Str. Brown, J. J. H.
Empire Steamship Co.
Str. Truesdale, Wm. H.
- No. 33 **Brown & Co., Mgrs., H. H., Rockefeller Bldg., Cleveland, O.**
Brown Translt Co.
Str. Brown, Fayette.
Headwaters S. S. Co.
Str. Brown, Harvey H.
Str. Croft, Harry W.
Merrimac Steamship Co.
Str. Bradley, M. A.
- No. 34 **Brown, Lawrence D., 11312 Clifton Blvd., Cleveland, Ohio.**
Str. Aztec.
- No. 35 **Brown, W. C., Plymouth, Mich.**
Str. Helen C.
- No. 36 **Buckeye Lake Sand & Gravel Co., Sandusky, Ohio.**
Str. Groh, Mary.
- No. 37 **Budreau, Lawrence, Rainey River, Ont.**
Str. Agwinde.
- No. 38 **Buffalo & Fort Erie S. S. Co., Ltd., Ft. Erie, Ont.**
Str. Orleans.
- No. 39 **Buller, Wm., Peterborough, Ont.**
Str. Water Lily.
- No. 40 **Burns, Richard, 153 Ohene St., Detroit, Mich.**
Bge. Lozen, J. B.

- No. 41 Cadillac Builders Supply Co., Detroit, Mich.
Str. Markham, Geo. C.
- No. 42 Calcite Transportation Co., D. R. Parsons, Mgr., Foot
Orleans St., Detroit, Mich.
Str. Calcite.
- No. 43 Calvin Co., Ltd., Garden Island, Ont.
Str. Parthia.
- No. 44 Cameron Steamship Co., Detroit, Mich.
Str. Dahlke, H.
Str. Gunnell, E.
- No. 45 Canada Atlantic Transit Co. of U. S., W. H. Smith, Mgr.,
Canadian Express Bldg., Montreal, Can.
Str. Kearsarge.
Str. Orr, Arthur.
- No. 46 Canada Starch Co., Ltd., Cardinal, Ont.
Str. Holcombe, Ralph T.
- No. 47 Canada Steamship Lines, Ltd., J. W. Norcross, Managing
Director, Montreal, Canada, H. W. Cowan, Operating
Supt., Toronto, Ont.
Str. Ames, A. E.
Str. Beaverton.
Str. Bickerdike.
Str. Cadillac.
Str. Calgarian.
Str. City of Hamilton.
Str. City of Ottawa.
Str. Collingwood.
Str. Dawson, Sir Trevor.
Str. Edmonton.
Str. Emperor.
Str. Fairfax.
Str. Haddington.
Str. Hagarty, J. H. G.
Str. Hamiltonian.
Str. Iroquois.
Str. Juno.
Str. McKee, J. A.
Str. Maplegrove.
Str. Maplehill.

Str. Mapleton.
 Str. Martian.
 Str. Matthews, W. D.
 Str. Midland Prince.
 Str. Midland King.
 Str. Morden, W. G.
 Str. Omaha.
 Str. Osler, E. B.
 Str. Phelan, T. P.
 Str. Pellatt, H. M.
 Str. Sarnian.
 Str. Seguin.
 Str. Stadacona.
 Str. Toiler.
 Str. Water Lily.
 Str. Wyoming.
 Bge. Brookdale.
 Bge. Pennington, B. L.
 Bge. Reed, Isabella.
 Bge. Rickarton.
 Bge. Wayne.

(Northern Navigation Division)

H. H. Gildersleeve, Mgr., Sarnia, Ont.

Str. Doric.
 Str. Hamonic.
 Str. Huronic.
 Str. Ionic.
 Str. Noronic.
 Str. Rochester.
 Str. Waubic.

(Richelleu & Ontario Division)

T. Henry, Supt., Montreal, Canada.

Str. Aletha.
 Str. America.
 Str. Belleville.
 Str. Brockville.
 Str. Kingston.
 Str. Montreal.
 Str. Murray Bay.
 Str. News Boy.
 Str. Quebec.
 Str. Ramonia.
 Str. Rapids King.

Str. Rapids Prince.
Str. Rapids Queen.
Str. St. Irene.
Str. St. Lawrence.
Str. Saguenay.
Str. Syracuse.
Str. Tadausac.
Str. Thousand Islander.
Str. Trois Rivières.
Str. Varuna.

- No. 48 Canada Sugar Refining Co., Ltd., Montreal, Que.
Schr. Edith.
- No. 49 Canadian Oil Companies, Ltd., Toronto, Ont.
Sarnia-Toledo Transit Co., Ltd.
Bge. Calvert, W. S.
- No. 50 Canadian Maritime Co., Ltd., Montreal, Que.
Str. Wethersfield.
- No. 51 Canadian Pacific Car & Passenger Transfer Co., Ltd.,
Prescott, Ont.
Str. Lyon, Charles.
- No. 52 Canadian Pacific Railway Co., M. McD. Duff, Mgr.,
Montreal, Que.
Str. Alberta.
Str. Assiniboia.
Str. Athabasca.
Str. Keewatin.
Str. Manitoba.
- No. 53 Canadian Pacific Railway Co., M. McD. Duff, Mgr.,
Montreal, Que.
Str. Michigan.
Str. Ontario.
- No. 54 Canadian Towing & Wrecking Co., Ltd., Ft. William, Ont.
Str. Gogebic.
Str. Niagara.
Bge. Coteau.
Bge. Empire.
Bge. Imperial.
Bge. McLaughlin, M. E.

- No. 55 Carrollton Steamship Co., Carrollton, Mich.
Str. Langell Boys.
- No. 56 Cavanaugh, W. P., Bay City, Mich.
Sch. Weaver, Jennie.
- No. 57 Cedar Point Resort Co., Sandusky, Ohio.
Str. Boeckling, G. A.
- No. 58 Central Canada Coal Co., Ltd., Geo. B. Wilkinson, Mgr.,
Brockville, Ont.
Bge. Georger, F. A.
- No. 59 Central Contracting Co., Ltd., C. E. Smith, Mgr., Ft. Wil-
liam, Ont.
Central S. S. Co.
Bge. Crete.
- No. 60 Charcoal Iron Co. of America, H. H. Bingham, Mgr.,
Detroit, Mich.
Str. Griffin.
- No. 61 Charland, Emile, Montreal, Canada.
Sch. Amarine.
- No. 62 Chatham Navigation Co., Chatham, Ont.
Str. Ossifrage.
- No. 63 Cheney, Tom, Ashtabula, Ohio.
Schr. Brown, Belle.
- No. 64 Chesborough, A. M., Emerson, Mich.
Schr. Skeelee, Edw. E.
- No. 65 Chew, Manley, Midland, Ont.
Str. Schoolcraft.
- No. 67 Chicago, Duluth & Georgian Bay Translt Co., R. C. Davis,
Mgr., 314 So. Clark, Chicago, Ill.
Str. North American.
Str. South American.

No. 69 Citizens Sand & Gravel Co., Capt. C. E. LeBeau, Mgr.,
Foot Magnolia St., Toledo, Ohio.
Str. Sawyer, Philetus.
Tug LeBeau, C. E.
Bge. Jones, C. B.

No. 70 Cleland, Herbert, Collingwood, Ont.
Georgian Bay Navigation Co.
Str. Soo City.

No. 71 Cleveland Engineering Construction Co., 778 Arcade,
Cleveland, Ohio.
Bge. Cutler, D. G.

No. 72 Cleveland-Cliffs Iron Co., Rockefeller Bldg., Cleveland,
Ohio.

Grand Island Steamship Co.

Str. Andaste.
Str. Cadillac.
Str. Grand Island.
Str. Ishpeming.
Str. Marquette.
Str. Mather, W. G.
Str. Michigan.
Str. Munising.
Str. Negaunee.
Str. Pioneer.
Str. Pontiac.
Str. Sheadle, J. H.

Presque Isle Trans. Co.

Str. Angeline.
Str. Presque Isle.
Str. White, Peter.

No. 73 Cleveland-Cliffs Iron Co., Mgrs., Rockefeller Bldg., Cleve-
land, Ohio.

Paisley Steamship Co.

Str. Central West.
Str. Paisley, Robert J.
Str. Panay.
Str. Schneider, Cletus.
Str. Wessee.

Morrow S. S. Co.

Str. Luzon.

Str. Maher, T. K.

Str. Morrow, John F.

Str. Schneider, A. E. R.

Bge. Hartnell, G. E.

No. 74 Cleveland & Buffalo Transit Co., Foot East 9th St., Cleveland, Ohio.

Str. City of Buffalo.

Str. City of Erie.

Str. Seeandbee.

Str. State of Ohio.

No. 75 Cleveland-Erieau S. S. Co., J. H. Clark, Mgr., Guardian Bldg., Cleveland, Ohio.

Str. Roosevelt, Theodore.

No. 76 Cleveland Transportation Co., A. E. R. Schneider, Mgr., Rockefeller Bldg., Cleveland, Ohio.

Str. Lewiston.

No. 77 Climie, Thomas B., St. Joe Island & Soo Line, Sault Ste Marie, Ont.

Str. Premier.

No. 78 Clow, J. M. & D. D., Marinette, Wis.

Str. Liberty.

No. 79 Clow & Nicholson, Duluth, Minn.

Str. Wehrle, Jr., A.

No. 80 Colbe, Wm. F., Pt. Dover, Ont.

Str. City of Dover.

No. 81 Collingwood Steamship Co., Ltd., Collingwood, Ont.

No. 82 Connolly, H. M., Montreal, Canada.

Str. City of London.

No. 83 Construction Materials Co., 109 N. Dearborn, Chicago, Ill.

Str. Barth, L. L.

No. 84 Cooper, Grant, Toronto, Ont.

Bge. Chambly.

Bge. Hamilton.

- No. 85 Crawford Tug Co., Wlarton, Ont.
Bge. Pease, E. S.
- No. 86 Crosby Transportation Co., Milwaukee, Wis.
Str. Conestoga.
Davidson Steamship Co.
Str. Davidson, Thomas.
Livingstone Steamship Co.
Str. Livingstone.
- No. 87 Crosthwaite, J. L., 15 Broad St., New York City.
Bge. Buckeye State.
- No. 88 Cunningham, John, Mattawa, Ont.
Str. City of Hailey Bury.
- No. 89 Cuyahoga Lumber Co., 1948 Carter Road, Cleveland, O.
Lake Steamship Co.
Str. Starke, C. H.
- No. 90 Daryaw, Henry, Wolf Island, Ont.
Schr. Ford River.
Schr. Taber, Horace.
- No. 91 Davidson, James, Bay City, Mich.
Str. Orinoco.
Str. Sacramento.
Str. Shenandoah.
Bge. Chieftain.
Bge. Gramplan.
Bge. Granada.
Bge. Matanzas.
Bge. Montezuma.
- No. 92 Davidson & Smith, Port Arthur, Ont.
Str. Fryer, R. L.
- No. 93 Davis Ship Bldg. Co., Ltd., Montreal, Canada.
Str. North Land.
- No. 94 Desmarteau, Alexandre, Montreal, Que.
Str. Boucherville.
- No. 95 Desrosiers, Alexandre, Lanoraie, Que.
Schr. Lyon, Mary.

- No. 96 Desrosler, Zenon, Sorel, Que.
Bge. Kahtadin.
- No. 97 Detroit & Windsor Ferry Co., Detroit, Mich.
Str. Britannia.
Str. Columbia.
Str. Excelsior.
Str. Garland.
Str. Pleasure.
Str. Pontiac.
Str. Promise.
Str. Sappho.
Str. St. Clair.
Str. Victoria.
- No. 98 Detroit & Cleveland Navigation Co., A. A. Schantz, Pres.
& Gen. Mgr., Detroit, Mich.
Str. City of Alpena II.
Str. City of Cleveland III.
Str. City of Detroit III.
Str. City of Detroit II.
Str. City of Mackinac II.
Str. City of St. Ignace.
Str. Eastern States.
Str. Western States.
- No. 99 Diamond Crystal Salt Co., St. Clair, Mich.
Douglass Transit Co.
Str. Colborn, A. R.
Str. Hilton.
- No. 100 Dominion Coal Co., Ltd., Montreal, Canada.
Bge. Alice.
Bge. Grandee.
Bge. Mabel.
- No. 101 Dominion Iron & Steel Co., Ltd., Sydney, Cape Breton.
Str. Corunna.
Str. Nevada.
Str. Wade, J. H.
- No. 102 Dominion Transportation Co., Ltd., J. J. Noble, Supt.,
Sault Ste. Marie, Ont.
Str. Caribou.
Str. Manitou.

- No. 103 Donnelley Salvage & Wrecking Co., Ltd., Kingston, Ont.
Bge. Harriet D.
Bge. Aloha.
- No. 103½ Douglass, Geo., Detroit, Mich.
Str. Marshall, Maggie.
- No. 104 Doville Lake Sand & Gravel Co., Toledo, Ohio.
Str. Commerce.
Str. DoVille, R. E.
- No. 105 Doyle, Patrick, Montreal, Canada.
Bge. Acadia.
- No. 106 Dunn Transportation Co., Theodore, 2607 W. Jefferson Ave., Detroit, Mich.
Str. Green, C. H.
Bge. Francombe, J. A.
Bge. Kennedy, W. L.
Bge. Our Son.
- No. 107 Durocher, T. L., Detour, Mich.
Bge. Holland, Grace.
- No. 108 Edgewood Shipping Co., Ltd., Montreal, Que.
Schr. Edgewood.
- No. 109 Emery, W. L., Detroit, Mich.
Str. H. Houghton.
- No. 110 Emig, T., St. Clair, Mich.
Str. Fitzgerald, R. P.
- No. 111 Empire Coal Co., Ltd., Montreal, Canada.
Bge. Empire No. 1.
- No. 112 Erie Excursion Co., Erie, Pa.
Str. Webster, John.
- No. 113 Erie & Michigan Ry. & Nav. Co., E. E. Wilhelm, Mgr., 108 So. LaSalle St., Chicago, Ill.
Str. Greene, M. T.

- No. 115 Fagen, Capt. Joe, Belleville, Ont.
Schr. Filer, Grace M.
- No. 116 Finn & Olsen Freighting Co., Marinette, Wis.
Str. Neff, S. O.
Schr. Stevens, J. H.
Schr. Joses.
Schr. Wisconsin.
- No. 117 Folger, H. S., Kingston, Ont.
Str. Pilgrim.
- No. 118 Foss Estate, E. B., Bay City, Mich.
Bge. Filmore, C. J.
- No. 119 Frazer-Brace & Co., Ltd., Montreal, Canada.
Str. Newona.
- No. 120 Garey, J. C., Saginaw, Mich.
Str. Ogemaw.
- No. 121 General Electric Co., Schenectady, N. Y.
Bge. Jessie.
- No. 122 General Transit Co., C. W. Bryson, Mgr., Leader-News
Bldg., Cleveland, Ohio.
Str. Maytham, Thomas.
Str. Mecosta.
Str. Oglebay, E. W.
Bge. Tyrone.
- No. 123 Gillen, Edward, Racine, Wis.
Str. Rudolph, William.
Bge. Progress.
- No. 124 Genzel, John, Wyandotte, Mich.
Str. Douglass.
- No. 125 Gillingham, J. H., Alpena, Mich.
Schr. Day, Eliza.
- No. 126 Gleason, Frederick D., 28 Campau Bldg., Detroit, Mich.
Str. Harlow.
Bge. Badger.

- No. 127 Gooderham, A. F., Toronto, Ont.
Str. Cleopatra.
- No. 128 Goodwin, Jas., Toronto, Ont.
Schr. Ada, Alice.
- No. 129 Goodrich Translt Co., Foot Michigan Ave., Chicago, Ill.
Str. Alabama.
Str. Arizona.
Str. Carolina.
Str. Christopher Columbus.
Str. Florida.
Str. Georgia.
Str. Indiana.
- No. 130 Graham & Morton Trans. Co. 308 River St., Chicago, Ill.
Str. City of Benton Harbor.
Str. City of Grand Rapids.
Str. City of St. Joseph.
- No. 131 Gordan, D. A., Wallaceburg, Ont.
Bge. Casey, Lyman C.
- No. 131½ Grand Trunk-Milwaukee Car Ferry Co., W. R. Davidson,
Gen'l Supt., Chicago, Ill.
Str. Grand Haven.
Str. Milwaukee.
- No. 132 Grand Trunk Railway System, R. Aiken, Supt. Ferries,
Detroit, Mich.
Str. Great Western.
Str. Huron.
Str. Landsdowne.
Wabash Railroad.
Str. Detroit.
Str. Transfer.
Str. Transport.
- No. 134 Great Lakes Steamship Co., Rockefeller Bldg., Cleveland,
Ohio.
Str. Belgium.
Str. Couiby, Harry.
Str. Cowle, J. B.
Str. Denmark.

Str. Dunn, Jr., John.
Str. Durstin, J. F.
Str. Hubbard, Charles.
Str. Leonard, G. B.
Str. Nettleton, A. E.
Str. Norway.
Str. Nottingham, Wm.
Str. Smith, B. Lyman.
Str. Smith, H. W.
Str. Smith, L. C.
Str. Smith, M. C.
Str. Smith, W. L.
Str. Sweden.
Str. Thompson, Smith.
Str. Warner, C. M.
Str. Wilkinson, H. S.

No. 135 Great Lakes Towing Co., Cleveland, Ohio.
Str. Favorite.
Str. Landbo.

No. 136 Great Lakes Transit Corporation, Buffalo, N. Y.
Str. Allegheny.
Str. Boston.
Str. Buffalo.
Str. Chicago.
Str. Conemaugh.
Str. Cooke, D. W.
Str. Delaware.
Str. Duluth.
Str. Juniata.
Str. Milwaukee.
Str. Muncy.
Str. North Lake.
Str. North Sea.
Str. North Star.
Str. Octorora.
Str. Rochester.
Str. Superior.
Str. Tionesta.
Str. Troy.
Str. Underwood, F. D.
Str. Utica.
Str. Wissahickon.

- No. 137 Guertin, Alphonse, Montreal, Que.
Str. Prefontaine.
- No. 138 Guertin, Joseph, Montreal, Canada.
Bge. Harrison, Ben.
- No. 139 Guyon, Calixte, Montreal, Que.
Str. Beauharnois.
- No. 140 Halgren, Emanuel, Marinette, Wis.
Schr. Cook, Mary Ellen.
- No. 141 Hall Coal Co., Geo., of Canada, Ltd., 211 McGill St., Mon-
treal, Canada.
Str. Compton.
Tug Florence.
Str. Follette, J. W.
Tug Hackett, H. J.
Tug Hackett, M. A.
Str. Ketchum, 2d, J. B.
Str. Lehigh.

Str. Mercur, Fred.
Str. Rhodes, R. R.
Str. Rock Ferry
Str. Senator Derbyshire.
Bge. A. D.
Bge. Cuba.
Bge. Ewen, F. D.
Bge. Gladys H.
Bge. Katie H.
Bge. Zapotec.
- No. 142 Hall Coal and Transportation Co., Inc., Geo., Ogdensburg,
N. Y.
Str. Iselin, Adrian.
Str. Kendall, H. J.
Str. Liberty.
Str. McTier, A. D.
Str. Robinson, L. W.
Str. Rugee, John.
Bge. Mathews, Jennie.
Bge. Sherman, W. A.

No. 143 Hammermill Paper Co., Erie, Pa.

Str. Harriet B.

Str. Jacob, C. W.

No. 144 Hamilton Transportation Co., 2431 South Lincoln Ave.,
Chicago, Ill.

Str. Niko.

Str. Pahlow, Lewis.

Str. Sawyer, W. H.

Bge. Interlaken.

Bge. Norris, A. B.

Bge. Redfern, C. E.

Bge. Tuxberry, A. C.

No. 145 Hanna & Co., M. A., Leader-News Bldg., Cleveland, Ohio.
Calumet Transportation Co.

Str. Agassiz, R. L.

Str. Saunders, Jr., E. N.

Str. Shaw, Q. A.

Str. Turner, J. J.

Str. Uhrig, Edw. A.

Bge. Thompson, A. W.

Cambria Steamship Co.

Str. Morrell, D. J.

Str. Townsend, E. Y.

Donner Steamship Co.

Str. Black, H. F.

Eastern Steamship Co.

Str. Wood, Joseph.

Franklin Trans. Co.

Str. Fitch, W. F.

Bge. Maitland, Alex.

Johnstown Steamship Co.

Str. Midvale.

Str. Morris, Effingham B.

Str. Newbold, Arthur E.

Str. Replogle, J. Leonard.

Str. Rogers, Wm. A.

Str. Slick, Edwin E.

LaBelle Steamship Co.

Str. LaBelle.

Mahoning Steamship Co.

Str. Donner, W. H.

Str. Hanna, L. C.

Str. Stackhouse, Powell.

Producers S. S. Co.

Str. Amberg, Wm. A.

Str. Hill, Lewis W.

Str. Thompson, Carmi A.

Republic Transportation Co.

Str. Brown, W. L.

Str. Elphicke, Mary C.

Str. French, G. Watson.

Virginia Steamship Co.

Str. Crawford, W. D.

No. 146 Harbor Commissioners, Montreal, Canada.

Str. Aberdeen.

No. 147 Harling, Thomas & Wm., Montreal, Canada.

Schr. Beechland.

No. 148 Harrah, C. W., Detroit, Mich.

Bge. Bloom, Nelson.

No. 149 Harrison & Sons Co., Ltd., John, Owen Sound, Ont.

Str. Harrison.

No. 150 Hart Transportation Co., Sturgeon Bay, Wis.

Str. Sailor Boy.

Str. Thistle.

No. 151 Hettler Lumber Co., Herman H., 2601 Elston Ave.,

Chicago, Ill.

Str. Christie, T. S.

Str. Hettler, H. H.

No. 152 Hickley, John, Sault Ste. Marie, Mich.

Str. Minnie M.

No. 153 Hill Steamboat Line, Kenosha, Wis.

Str. City of Marquette.

Str. Charles McVea.

No. 154 Hinkley, A. R., Oswego, N. Y.

Str. Phelps, M. G.

- No. 155 Hinckley Cornwall Forwarding Co., Alexandria Bay, N. Y.
Str. Hinckley.
Str. Isabella, H.
- No. 156 Hogan, M. J., Pt. Colborne, Ont.
Str. Lakeside.
- No. 157 Holmes & Co., Ogdensburg, N. Y.
Str. Island Belle.
- No. 158 Holmes & Co., W. E., Insurance Exchange Bldg., Chicago, Ill.
Central Transportation Co.
Str. Mueller.
Bge. Fryer, R. L.
- No. 159 Homegardner Sand Co., Sandusky, Ohio.
Str. Mary H.
- No. 160 Horn, Edward H., Mgr., 371 Hurlbut Ave., Detroit, Mich.
Str. Wolf, Wm. H.
- No. 161 Huntsville Lake of Bays & Lake Simcoe Nav. Co., Ltd.,
Huntsville, Ont.
Str. Iroquois.
Str. Joe.
Str. Ramona.
- No. 162 Hutchinson & Co., Mgrs., Leader-News Bldg., Cleveland,
Ohio.
Inland Steamship Co.
Str. Block, Joseph.
Str. Leopold, N. F.
Pioneer Steamship Co.
Str. Amazon.
Str. Augustus, A. A.
Str. Australia.
Str. Billings, Frank.
Str. Butler, Jr., J. G.
Str. Hazard, F. R.
Str. Hutchinson, J. T.
Str. McKinney, Price.
Str. Mullen, Martin.
Str. Nye, H. B.
Str. Paine, W. A.,

Str. Pierce, E. L.
Str. Polynesia.
Str. Stanton, John.
Str. Sullivan, J. J.
Str. Tomlinson, G. A.
Str. Walsh, J. P.

No. 163 Hydraulic Sand & Transit Co., 908 Chamber of Commerce
Bldg., Chicago, Ill.
Str. Hydro.

No. 164 Illinois State Militia, Chicago, Ill.
Str. Commodore.

No. 165 Imperial Oil Co., Ltd., J. Wilkie, Marine Supt., Imperial
Oil Bldg., Toronto, Ont.
Str. Imperial.
Str. Imperoyal.
Str. Iocoma.
Str. Impoco.
Str. Iocolite.
Str. Regmolite.
Str. Royalite.
Str. Sarnolite.
Bge. No. 41.

No. 166 Inter-Lake Auto Transportation Co., J. A. Page, Mgr.,
Toledo, Ohio.
Str. Huron.

No. 167 Interlake Sand & Gravel Co., Cleveland, Ohio.
Str. Boyce, I. J.

No. 168 International Transit Co., Sault Ste. Marie, Ont.
Str. Algoma.
Str. Bawating.

No. 169 Irondequoit Navigation Co., Irondequoit, N. Y.
Str. Glenn.

No. 170 Isabell, Thomas, Sturgeon Bay, Wis.
Schr. Nau, Libbie.

- No. 171 Jenkins, C. O., Mgr., Rockefeller Bldg., Cleveland, Ohio
Jenkins Steamship Co.
Str. Jenkins, C. O.
Str. Shaughnessy, Sir Thomas.
Str. Squire, F. B.
- No. 172 Jex, H. N., 1749 Summit Ave., Toledo, Ohio.
Str. Hazel.
Bge. Clint, D. K.
Bge. Judd, E. T.
Bge. Three Brothers.
- No. 173 Johnson, Frederick R., Pt. Colborne, Ont.
Str. Sarnor.
- No. 174 Kaine & Bird Transportation Co., Ltd., Quebec, Que.
Bge. Norway.
- No. 175 Keegan & Cousins, Belleville, Ont.
Bge. Newland, J. B.
- No. 176 Keenan Brothers, Ltd., Owen Sound, Ont.
Schr. Magill, C. J.
Tug Keenan.
- No. 177 Keenan, Wm., Fenwick, Ont.
Bge. Scotia.
- No. 178 Kelly, Edward, Wallaceburg, Ont.
Bge. Cyrenian.
- No. 179 Kelly Island Lime & Transportation Co., Sandusky, Ohio.
Str. Chisholm, Jr., Alva.
Str. Clinton.
Tug Fitzgerald, Richard.
Str. Kelly Island.
Str. Penobscot.
Str. Recor, E. P.
Bge. Kelly, Norman.
Bge. Pellatt, J. H.
- No. 180 Keystone Transportation Co., of Canada, Ltd., H. M.
Norris, Traffic Mgr., Rockefeller Bldg., Cleveland, O;
John Waller, Supt., Power Bldg., Montreal, Que.
Str. Key Port.
Str. Keybell.

Str. Keynor.
Str. Keyvive.
Str. Key West.

- No. 181 King, A. B., Tonawanda, N. Y.
Bge. King, A. B.

- No. 182 Kinney, A. T., Mgr., Rockefeller Bldg., Cleveland, Ohio.
Kinney Steamship Co.
Str. Ashley, J. S.
Str. Ireland, R. L.
Str. Kinney, A. T.
Str. Upson, A. S.

- No. 183 King Edward Starch Co., Ltd., Montreal, Canada.
Str. Duchess of York.

- No. 184 Kirkwood Steamship Co., Montreal, Que.
Str. Glen Allen.

- No. 185 Kittleson, B., Racine, Wis.
Schr. Taylor, J. V.

- No. 186 Kreeton Co., J. L. LaBelle, Mgr., Johnswood, Drummond
Island, Mich.
Str. Parks, O. E.
Str. Wilson, Mathew.
Bge. Knapp, F. M.
Bge. Troy.

- No. 187 Kroos, Julius, Sheboygan, Wis.
Str. Chipman, Susie.

- No. 188 Laidlaw Lumber Co., Ltd., Sarnia, Ont.
Str. Hall, Stephen C.
Bge. Brainard, K.

- No. 189 Lake Erie Excursion Co., Foot Commercial St., Buffalo,
N. Y.
Str. Americana.
Str. Canadiana.

- No. 190 Lake Ontario & Bay of Quinte Steamboat Co., Ltd.,
Kingston, Ont.
Str. Caspian.
Str. North King.

- No. 191 Lake Nipissing Shipping & Trans. Co., Ltd., Toronto, Ont.
Str. Lewis, Elgin L.
- No. 192 Lake Sand Co., R. F. Smith, Mgr., 19 LaSalle St., Chicago, Ill.
Str. Hausler, M. G.
- No. 193 Lake Shore Sand & Gravel Co., Toronto, Ont.
Str. City of New York.
- No. 194 Lake Shore Steamship Co., P. O. Box 175, Milwaukee, Wis.
Str. Hennipin.
- No. 195 Lake Superior Co., Ltd., Sault Ste. Marie, Ont.
Str. Gray, G. R.
- No. 195½ Lawrence, Julius, Marine City, Mich.
Bge. Gawn, Thomas.
- No. 196 LeBeau Wrecking Co., Foot Magnolia St., Toledo, Ohio.
Str. Sawyer, Philletus.
Tug LeBeau, Clarence.
Bge. Jones, C. B.
- No. 197 Lehigh Valley Transportation Co., M. D. Young, Supt., Buffalo, N. Y.
Str. Mauch Chunk.
Str. Wilkesbarre.
- No. 198 Levis Ferry Co., Ltd., Levis, Que.
Str. Colomb.
- No. 199 Lloyd, Walter S., Duluth, Minn.
Portage Lake Steamship Co.
Str. Plow Boy.
- No. 200 Lockhart, D. O., Sandusky, Ohio.
Str. Wente, R. C.
Str. Anna Laura.
- No. 201 Lomer, Adolf, Montreal, Que.
Str. Armenia.
- No. 202 Maid of the Mist Steamboat Co., Ltd., Niagara Falls, N. Y.
Str. Maid of the Midst.

- No. 203 **Marquette & Bessemer Dock & Nav. Co., A. Leslie, Mgr.,**
 Walkerville, Ont.
 Str. Marquette & Bessemer No. 1.
 Str. Marquette & Bessemer No. 2.
- No. 204 **McCullough, Wm., Port Huron, Mich.**
 Bge. Coates, L. B.
- No. 205 **McGrory, Katie, Prescott, Ont.**
 Bge. New Dominion.
- No. 206 **McKenzie, Edward, Smith Falls, Ont.**
 Str. Jeska.
- No. 207 **McLean, Pierre, LaPrairie, Que.**
 Str. St. Louis.
- No. 208 **McLouth, Sidney C., Marine City, Mich.**
 Huron Transportation Co.
 Str. Mitchell, Samuel.
 River Transit Co.
 Str. Hazard, W. A.
 Str. McLouth, Pierce.
 Str. Prentice, J. H.
 Str. Scranton.
 Str. Shores, Jr., E. A.
 Bge. Genoa.
 Bge. Mowatt, James.
- No. 210 **McMillan, Hugh, Toronto, Ont.**
 Str. Sowards.
- No. 211 **McQueen Tug & Transit Co., Amherstburg, Ont.**
 Str. City of Dresden.
 Tug LeRoy Brooks.
- No. 212 **McSherry, P. J., Toronto, Ont.**
 Str. Ongiara.
- No. 213 **Marine Navigation Co., Ltd., Montreal, Canada.**
 Bge. Inverneill.
 Bge. Inversnaid.
- No. 214 **Mathews Steamship Co., Ltd., Board of Trade Bldg.,**
 Toronto, Ont.
 Str. Clifton.

Str. Easton.
Str. Laketon.
Str. Malton.
Str. Riverton.
Str. Viking.
Str. Yorkton.

No. 215 Merchants Transportation Co., Chicago, Ill.

Str. Kansas.
Str. Missouri.

No. 215½ Miller, J. C., Owen Sound, Ont.

Bge. Corisande.

No. 216 Milwaukee Railway & Elec. Light Co., Milwaukee, Wis.

Bge. Butman, Myron.
Bge. Carpenter, A. A.

No. 217 Miller & Goldenberg, La Presse Bldg., Montreal, Que.

Str. Marshall, Samuel.

No. 218 Milwaukee Sand & Gravel Co., 779 N. Water St., Milwaukee, Wis.

Str. Ellen.

No. 219 Milwaukee Western Fuel Co., Milwaukee, Wis.

Bge. Transfer.
Bge. Transport.

No. 220 Misner, Robert S., Sault Ste. Marie, Ont.

Str. Langell, Simon.
Str. Overland.

No. 221 Minor, C. J., Sandusky, Ohio.

Bge. Keith, Ida.

No. 222 Mitchell, John, Rockefeller Bldg., Cleveland, Ohio.

Buffalo Steamship Co.
Str. Agnew, W. C.
Str. Clement, S. M.
Str. Goodyear, Frank H.
Str. Kennedy, Hugh.

No. 223 Montreal Lighterage Co., Ltd., Montreal, Canada.

Bge. Ark.

**No. 224 Montreal Transportation Co., Ltd., H. N. McMaster,
Marine Supt, 286 St. James St., Montreal, Que.**

Str. Advance.
Str. Arabian.
Str. Atikoken.
Str. Cataract.
Str. Glenmount.
Str. India.
Str. Joyland.
Str. McVittie, A.
Str. Manola.
Str. Nicaragua.
Str. Oatland.
Str. Simla.
Str. Stormount.
Str. Valcartier.
Str. Vinmount.
Str. Westmount.
Str. Westorian.
Str. Windsor.
Tug Alert.
Tug Bronson, H. F.
Tug Escort.
Tug Hall, Mary P.
Tug Thomson, D. G.
Tug Weaver, R. G. A.
Bge. Bacon, M. S.
Bge. Brighton.
Bge. Cobourg.
Bge. Dakota.
Bge. Davie, G. T.
Bge. Dorchester.
Bge. Dunmore.
Bge. Ethel.
Bge. Gaskin, John.
Bge. Godfrey, G.
Bge. Hamilton.
Bge. Hilda.
Bge. Mamie.
Bge. Montreal.
Bge. Nadine.
Bge. Quebec.
Bge. Thrush.

Owners or Managers

Bge. Thunder Bay.
Bge. Ungava.

No. 225 Montreal & Cornwall Nav. Co., Ltd., Cornwall, Ont.
Str. Brittanic.
Str. Emerald.
Str. Filgate.

No. 226 Morgan Co., John C., Traverse City, Mich.
Str. Wilson, Anna C.
Str. Mary Ethel.

No. 227 Morton Salt Co., R. K. Warren, Supt., Railway Exchange
Bldg., Chicago, Ill.
Str. Marlon.
Str. Oades, John.
Bge. Aurora.

No. 228 Mullen Coal Co., Amherstburg, Ont.
Str. Alaska.
Str. Otis, John.
Bge. Tilden, S. J.

No. 229 Murphy, John E., Chicago, Ill.
Str. Bon Ami.

No. 230 Muskoka Lakes Nav. & Hotel Co., Ltd., Toronto, Ont.
Str. Auger, Antoine.
Str. Charlie M.
Str. Islander.
Str. Nipissing.
Str. Oriole.
Str. Sagamo.

No. 231 National Transit Co., Escanaba, Mich.
Str. Buckley, Edw.
Bge. Halstead.

No. 232 Neff, Charles S., 1598 Lake Drive, Milwaukee, Wis.
Str. Kalkaska.
Str. Venezuela.
Bge. Liberty.

No. 233 Nesbit, J. S., Sarnia, Ont.
Str. Canada.

The International Ship Masters' Association.

**Nessen Lumber Co., J. O., Peoples Gas Bldg., Chicago,
Ill.**

**Nessen Transportation Co.
Str. Horn, Charles.
Str. Nessen, N. J.**

**No. 235 New Ontario Trans. Co., Ltd., Pt. Arthur, Ont.
Str. O'Brien, M. J.**

**No. 236 Niagara Navigation Co., Ltd., Toronto, Ont.
Str. Cayuga.
Str. Chippewa.
Str. Corona.
Str. Macassa.
Str. Modjeska.
Str. Turbinia.**

**No. 237 Niagara, St. Catherines & Toronto Nav. Co., Ltd., E. W.
Olmer, Gen'l Supt., St. Catherines, Ont.
Str. Dalhousie City.**

**No. 238 Nicholson Transit Co., Capt. Wm. Nicholson, Mgr., Cam-
pau Bldg., Detroit, Mich.
Str. Fellowcraft.
Str. Roumania.**

**No. 239 Nipigon Transit Co., W. J. Crosby, Mgr., Pt. Huron, Mich.
Str. Ford, J. C.**

**No. 240 Normoyle, Michael, Montreal, Que.
Str. Bain, Jesse.**

**No. 241 North American Bent Chair Co., Owen Sound, Ont.
Str. Michipicoten.**

**No. 242 North Bay & French River Trans. Co., Ltd., North Bay
Ont.
Str. Northern Belle.**

**No. 243 North Shore Transit Co., W. J. Crosby, Mgr., Pt. Huron,
Mich.
Bge. Owen, Geo. B.**

**No. 244 O'Connor Steamboat & Hotel Co., Ltd., Toronto, Ont.
Str. Belle of Temsgani.**

Str. Chance.
Str. Marie.

No. 245 O'Hagen, John J., 144 Grove St., Tonawanda, N. Y.
Twin City Transportation Co.
Str. Arizona.
Str. Buel, F. R.

No. 246 Oakes, Herbert K., Mgr., Rockefeller Bldg., Cleveland, Ohio.
Beaver Steamship Co.
Str. Oakes, Herbert K.
Str. Utley, E. H.
Franklin Steamship Co.
Str. Berry, B. F.
Str. Earling, E. J.
Str. Ford, Emory L.

No. 247 Ogdensburg S. S. Co., Ogdensburg, N. Y.
Str. Columbia.

No. 248 Oliver, James, Kingston, Ont.
Bge. Andrews, A. L.

No. 249 Ontario Car Ferry Co., Ltd., W. H. Smith, Mgr., 710 Canadian Express Bldg., Montreal, Can.
Str. Ontario No. 1.
Str. Ontario No. 2.

No. 250 Ontario Gravel Freightng Co., Windsor, Ont.
Bge. Harsen.

No. 251 Ontario Trading Co., Ogdensburg, N. Y.
Str. Pentland.

No. 252 Ontario Transportation & Pulp Co., Ltd., Thorald, Ont.
Str. Boyce, M. H.
Str. Linden.

No. 253 Ottawa Transportation Co., Ltd., Ottawa, Ont.
Str. Hall.
Str. Scotchman.
Bge. Albion.
Bge. Blackburn, R. L.
Str. Bremner, E. R.

Bge. Brunette.
Bge. Booth, J. R.
Bge. Burstall, J.
Bge. Cox, R. M.
Bge. Fitch Edson.
Bge. Iona.
Bge. Jumbo.
Bge. Murill.
Bge. Redfern, J. H.
Bge. Robertson, J.
Bge. Thurso.
Bge. Todd, J. W.
Bge. Waters, P.
Bge. Whelan, P.

No. 254 Paisley S. S. Co., Cleveland-Cliffs Iron Co., Mgrs., Rockefeller Bldg., Cleveland, Ohio.

Str. Central West.
Str. Pansy.
Str. Paisley, Robert J.
Str. Schneider, Cletus.
Str. Wesee.

Morrow Steamship Co.
Str. Luzon.
Bge. Hartnell, G. E.

No. 255 Patterson, J. T., Kingston, Ont.
Schr. St. Louis.

No. 256 Patterson, Norman M., Ft. William, Ont.
Str. Van Allen, D. R.

No. 257 Peacock, J. H., Port Hope, Ont.
Bge. Arthur.

No. 258 Pelee Island Sand & Gravel Co., 1800 Scranton Road, Cleveland, Ohio.
Str. Stafford, W. R.

No. 259 Pelee & Lake Erie Nav. Co., Ltd., Pelee Island, Ont.
Str. Clarke, Alfred.

No. 260 Pembroke Trans. Co., Pembroke, Ont.
Str. Oisean.

- No. 261 Peninsular Steamboat Co., Sandusky, Ohio.
Str. Olcott.
- No. 262 Peninsula Tug & Towing Co., Ltd., Wiarton, Ont.
Bge. Jackson, G. K.
Bge. Sands, Isabella.
Tug Crawford.
- No. 263 Pennsylvania & Ontario Trans. Co., Ashtabula Harbor, O.
Str. Ashtabula.
- No. 264 Pere Marquette Line Steamers, Gus Kitizinger, Mgr.,
Manistee, Mich.
Str. Pere Marquette No. 3.
Str. Pere Marquette No. 4.
Str. Pere Marquette No. 6.
Str. Pere Marquette No. 8.
- No. 265 Pere Marquette S. S. Co., W. L. Mercereau, Mgr., Ludington, Mich.
Str. International.
Str. Pere Marquette.
Str. Pere Marquette No. 14.
Str. Pere Marquette No. 17.
Str. Pere Marquette No. 18.
Str. Pere Marquette No. 19.
Str. Pere Marquette No. 20.
- No. 266 Peterson & Collinge, Lake & St. Lawrence Transit Co.,
840 Rockefeller Bldg., Cleveland, Ohio.
Str. Lakeport.
Str. Lakewood.
Bge. Richland Daisy.
- No. 267 Pickands-Mather & Co., Mgrs., Western Reserve Bldg.,
Cleveland, Ohio.
Interlake Steamship Co.
Str. Adriatic.
Str. Arcturus.
Str. Argus.
Str. Calumet.
Str. Campbell, J. A.
Str. Canopus.
Str. Cepheus.

Str. Cetus.
Str. Clarke, E. A. S.
Str. Corvus.
Str. Crete.
Str. Cygnus.
Str. Dalton, H. G.
Str. Davock, W. B.
Str. Elba.
Str. Hemlock.
Str. Hoyt, J. H.
Str. Hydrus.
Str. Indus.
Str. Jones, Harry R.
Str. Jupiter.
Str. Lagonda.
Str. Lupus.
Str. McCullogh, Jr., C. H.
Str. Mars.
Str. Mather, Samuel.
Str. Mills, D. O.
Str. Morse, J. C.
Str. Neptune.
Str. Odanah.
Str. Pathfinder.
Str. Pegasus.
Str. Perseus.
Str. Regulus.
Str. Reed, J. H.
Str. Robinson, C. S.
Str. Saturn.
Str. Sellwood, Joseph.
Str. Sherwin, John.
Str. Sirius.
Str. Stone, Amasa.
Str. Taurus.
Str. Taylor, Moses.
Str. Uranus.
Str. Vega.
Str. Venus.
Str. Verona.
Str. Victory.
Str. Wallace, J. C.
Str. Wolvin, A. B.

Bge. Constitution.

Bge. Sagamore.

No. 268 Pittsburg Steamship Co., Rockefeller Bldg., Cleveland,
Ohio.

Str. Baker, G. F.

Str. Bessemer, Sir Henry.

Str. Black, C. A.

Str. Buffington, E. J.

Str. Bunsen, R. W. E.

Str. Clemson, D. M.

Str. Cole, T. F.

Str. Collins, E. C.

Str. Coralia.

Str. Corey, W. E.

Str. Cornell.

Str. Cort, Henry.

Str. Crawford, G. G.

Str. Crescent City.

Str. Dickson, W. B.

Str. Dinkey, A. C.

Str. Eads, J. B.

Str. Edenborn, Wm.

Str. Ellwood, I. L.

Str. Empire City.

Str. Ericsson, John.

Str. Fairbairn, Sir Wm.

Str. Farrell, J. A.

Str. Fibbert, W. J.

Str. Frick, H. C.

Str. Fulton, Robt.

Str. Garey, E. H.

Str. Gates, J. W.

Str. Harvard.

Str. Harvey, A. F.

Str. Hill, J. J.

Str. Houghton, D.

Str. House, F. E.

Str. Kerr, D. G.

Str. Linn, W. R.

Str. Lynch, Thomas.

Str. McDougall, Alex.

Str. McGonagle, W. A.

Str. McLean, J. H.
Str. Malietoa.
Str. Maricopa.
Str. Mariposa.
Str. Maritana.
Str. Mataafa.
Str. Mather, Samuel.
Str. Maunaloa.
Str. Mitchell, Penticost.
Str. Morgan, J. P.
Str. Morgan, Jr., J. P.
Str. Morse, S. F. B.
Str. Murphy, S. J.
Str. Neilson, J. B.
Str. Niagara Frontier.
Str. Olcott, W. J.
Str. Palmer, W. P.
Str. Pargny, E. W.
Str. Perkins, G. W.
Str. Phipps, Henry.
Str. Poe, Gen. O. M.
Str. Princeton.
Str. Queen City.
Str. Ream, N. B.
Str. Rensselaer.
Str. Richardson, R. R.
Str. Roberts, Jr., P.
Str. Rockefeller, F.
Str. Rogers, H. H.
Str. Schiller, W. B.
Str. Shaw, H. L.
Str. Shiras, McG.
Str. Siemans, Sir Wm.
Str. Stephenson, Geo.
Str. Superior City.
Str. Trimble, Richard.
Str. Watt, James.
Str. Wiedner, P. A. B.
Str. Williams, Homer D.
Str. Zeising, August.
Str. Zenith City.
Bge. Bell, Sir I. L.
Bge. Bryn Mawr,

Bge. Carrington.
 Bge. Corliss, G. H.
 Bge. Fritz, John.
 Bge. Holley, Alex.
 Bge. Jenny, W. LeB.
 Bge. Krupp, Alfred.
 Bge. Magna.
 Bge. Maia.
 Bge. Maida.
 Bge. Manda.
 Bge. Manila.
 Bge. Marcia.
 Bge. Marsala.
 Bge. Martha.
 Bge. Nasymith, James.
 Bge. Roebbing, J. A.
 Bge. Smeaton, John.
 Bge. Thomas, S. G.
 Bge. 137.

No. 269 Playfair, James, Mgr., Midland, Ont.
 Great Lakes Trans. Co., Ltd.

Str. Glenbrae.
 Str. Glencadam.
 Str. Glencalron.
 Str. Glenfinnan.
 Str. Glenisla.
 Str. Glenlevit.
 Str. Glenorchy.
 Str. Glenshee.
 Str. Glenstriven.
 Str. Glenyon.

No. 270 Point Ann Quarries, Ltd., McKinnon Bldg., Toronto, Ont.

Str. Lake Michigan.
 Str. Rolph, John.
 Tug Gilbert.
 Bge. Dobbins, D. P.
 Bge. Minch, Sophia.
 Bge. Moran, D.
 Bge. Muir, A.

- No. 271 **Potter-Teare Transit Co.,** Carter Road S. W., Cleveland, Ohio.
Str. McGregor, M. A.
- No. 272 **Pringle Barge Line Co.,** R. C. Pringle, Mgr., Rockefeller Bldg., Cleveland, Ohio.
Tug Pringle, Robt. C.
Tug Pringle, W. R.
Bge. Barlum, J. J.
Bge. Chattanooga.
Bge. Eddy, J. F.
Bge. Golden Age.
Bge. Iron Cliff.
Bge. Mingo.
- No. 273 **Port Huron & Sarnia Ferry Co.,** Port Huron, Mich.
Str. Beard, James.
Str. City of Cheboygan.
Str. Conger, O. D.
Str. Dormer, Grace.
Str. Hiawatha.
- No. 274 **Prindiville & Sons,** John, 208 So. La Salle St., Chicago, Ill.
Str. Foster, Parks.
- No. 275 **Quebec & Port Levis Ferry Co., Ltd.,** Quebec, Que.
Str. Shaw, Charles H.
Str. Polaris.
- No. 276 **Reed Towing & Wrecking Co., Ltd.,** Sarnia, Ont.
Tug Smith.
- No. 277 **Reid Towing & Wrecking Co.,** Pt. Huron, Mich.
Str. Manistique.
Str. Pawnee.
Bge. Edwards, J. R.
Bge. Orton, M. E.
- No. 278 **Reiss Steamship Co. of Ohio,** Reiss Bldg., Sheboygan, Wis.
Str. Byers, A. M.
Str. Reiss, Clemens A.
Str. Reiss, John P.
Str. Reiss, Otto M.
Str. Reiss, Peter.

Str. Reiss, Richard J.

Str. Reiss, Wm. A.

No. 279 Reynolds, J. E., 514 Ontario St., Port Huron, Mich.
Str. Huron City.

No. 280 Richardson Co., W. C., John T. Kelley, Mgr., Leader-News
Bldg., Cleveland, Ohio.

Bristol Transit Co.

Str. Colonel.

Str. Senator.

Castle Transit Co.

Str. Goulder, Harvey D.

Fort Henry Transit Co.

Str. Richardson, W. C.

Hanna Transit Co.

Str. Hanna, Jr., H. M.

Hubbard Steamship Co.

Str. Hubbard, C. Russell.

Mentor Transit Co.

Str. Uhrig, Alex B.

Miller Transit Co.

Str. Miller, L. B.

Montreal Transit Co.

Str. Livingstone, Wm.

Norton Transit Co.

Str. Norton, D. Z.

Ottawa Transit Co.

Str. Stifel, W. F.

Yosemite Transit Co.

Str. Yosemite.

No. 281 Richland Steamship Co., Rockefeller Bldg., Cleveland, O.
Str. Richland Star.
Str. Richland Queen.

No. 282 Rideau Lakes Nav. Co., Ltd., Kingston, Ont.
Str. Rideau King.
Str. Rideau Queen.

No. 282½ River Rouge Sand & Gravel Co., Detroit, Mich.
Str. Powell, L. G.

No. 283 Robineau, A., 828 St. Hurbert St., Montreal, Canada.
Str. Morley, W. B.

- No. 284 Roe Brothers, Harbor Springs, Mich.
Str. Columbia.
- No. 285 Ross, Charles, Pt. Maitland, Ont.
Str. City of Ladysmith.
- No. 286 Saginaw Bay Trans. Co., Cleveland, Ohio.
Bge. Bottsford, Rhoda.
- No. 287 Sands, Salt & Lumber Co., Louis, Manistee, Mich.
Str. Wotan.
- No. 288 Sanderson, Chas. J., Milwaukee, Wis.
Schr. Simpson, L. A.
- No. 289 Sanderson, M., Milwaukee, Wis.
Schr. Kewaunee.
- No. 290 Sanford, James, Charlevoix, Mich.
Str. Stephenson, S. M.
- No. 291 Sandusky & Islands Steamboat Co., Chas. N. Wells, Mgr.,
Sandusky, Ohio.
Str. Arrow.
- No. 292 Schlosser, Win, Milwaukee, Wis.
Schr. Stafford.
- No. 293 Schnorbach Greiling Co., Muskegon, Mich.
Str. Third Michigan.
- No. 294 Scott, William, Wallaceburg, Ont.
Str. Brittain, R. C.
- No. 295 Sellwood, R. M., Mgr., Sellwood Bldg., Duluth, Minn.
Masaba Steamship Co.
Str. Morrow, Joe S.
- No. 296 Sharp, W. H., Bay City, Mich.
Str. Donaldson, J. P.
Bge. Dayton.
Bge. Wright, A. W.
- No. 296½ Shaw, M. J., Buffalo, N. Y.
Str. Chicora.

- No. 297 Shaw, Howard L., Mgr., Bay City, Mich.
Lake Transit Co.
Str. City of Bangor.
Str. Penobscot.
- No. 298 Shenango Steamship Co., Rockefeller Bldg., Cleveland, Ohio.
Shenango Steamship Co.
Str. Snyder, W. P.
Str. Wilpen.
Shenango S. S. & Trans. Co.
Str. Shenango.
Str. Schoonmacher, Colonel J. M.
Str. Snyder, Jr., W. P.
- No. 299 Silver Islet Nav. Co., Ltd., Silver Islet, Ont.
Str. Forest City.
- No. 300 Sincinnes-McNaughton Line, Montreal, Canada.
Bge. Witbeck, Henry.
- No. 301 Sims, T. C., Little Current, Ont.
Str. Bon Ami.
- No. 302 Snook, John R., Mt. Clemens, Mich.
Str. Atlantis.
- No. 303 Solman, Lawrence, Toronto, Ont.
Str. Clark Brothers.
Str. Hanlan, John.
Str. Mazeppa.
- No. 304 Sowards, J. F., Kingston, Ont.
Str. Jex, H. N.
- No. 305 Spencer Bros., Napanee, Ont.
Schr. Davis, Lyman M.
Schr. Merrill, J. B.
- No. 306 Spencer, F. C., Saginaw, Mich.
Str. Miami.
Bge. Mueller.
- No. 307 Spokane Steamship Co., Port Huron, Mich.
Str. Billman, C. F.
Str. Spokane.

- No. 308 St. Joe Island & Sault Line, Ltd., Sault Ste. Marie, Ont.
Str. City of Chatham.
- No. 309 Standard Oil Co., Whiting, Ind.
Bge. "C".
Str. Cowan, Wm. P.
Str. Renown.
- No. 311 St. Lawrence Coal & Freightng Co., Ogdensburg, N. Y.
Str. Carter, W. J.
- No. 312 St. Lawrence Trans. Co., Toronto, Ont.
Str. Pennsylvania.
- No. 313 St. Maurice Paper Co., Ltd., Montreal, Canada.
Bge. Wilson, Agnes.
- No. 314 Steinbrenner, Henry, Mgr., Rockefeller Bldg., Cleveland.
Ohio.
Kinsman Translt Co.
Str. Andrews, Mathew.
Str. Minch, Anna C.
Str. Minch, Phillip.
Str. Steinbrenner, Henry.
- No. 315 Stephenson Co., Trustees, Isaac-Wells, Delta County, Mich.
Str. Stephenson, I. W.
- No. 316 Sturgeon Bay Stone & Trans. Co., Sawyer, Wis.
Str. Foster, I. N.
Bge. Corning, Ida.
Bge. Mott, Richard.
Bge. Oak Leaf.
- No. 317 Sullivan & Co., D., Mgrs., 208 So. La Salle St., Chicago, Ill.
Str. Bixby, W. K.
Str. Dimmick, J. K.
Chicago Navigation Co.
Str. Dunham, J. S.
Str. Fitzgerald, W. E.
Christopher Steamship Co.
Str. Christopher.

Gartland Steamship Co.
Str. Wolfe, W. H.
Milwaukee-Western S. S. Co.
Str. Manchester.

No. 318 Superior Sand & Gravel Co., 726 Dime Bank Bldg., Detroit,
Mich.
Str. Osborne, F. C.

No. 319 Surett, Walter S., 332 So. Michigan, Chicago, Ill.
Str. Michigan Central.

No. 320 Swift Coal Co., Ltd., James, Kingston, Ont.
Str. Chamberlin, C. W.
Bge. White & Friant.

No. 321 Tobias, John C., Gobel Bldg., Detroit, Mich.
Str. Gladstone.

No. 322 Trotter, F. J., Amherstburg, Ont.
Str. Mills, J. E.
Tug Trotter, M. E.

No. 323 Tomlinson, G. A., Mgr., Rockefeller Bldg., Cleveland, Ohio.
Duluth Steamship Co.
Str. Philbin, D. M.
Str. Sonoma.
Str. Sultana.

Globe Steamship Co.
Str. Adams, Cuyler.
Str. Ball, F. C.
Str. Ball Brothers.

Inter-Ocean Steamship Co.
Str. Davidson, J. E.
Str. Sierra.

National Steamship Co.
Str. Hart, F. W.
Str. Watson, C. W.
Superior Steamship Co.
Str. Barnum, G. G.
Str. Sonora.
Str. Sinaloa.

Trlton Steamship Co.
Str. Ranney, R. P.

Zenith Steamship Co.
Str. Hoover & Mason.

No. 324 Toronto Ferry Co., Toronto, Ont.
Str. Bluebell.
Str. Island Queen.
Str. Jasmine.
Str. Luella.
Str. Mayflower.
Str. Primrose.
Str. Trillium.

No. 325 Toronto, Hamilton & Buffalo Nav. Co., Hamilton, Ont.
Car Ferry Maitland No. 1.

No. 326 Tracey, H. E. N., Marine City, Mich.
Bge. Corry, Mike.

No. 327 Tri-State Steamship Co., M. S. Thompson, Mgr., 1111
Superior Viaduct, Cleveland, Ohio.
Str. Lakeland.

No. 328 United Fuel & Supply Co., Detroit, Mich.
Str. Brokate.
Str. Cadwell, C. W.
Str. Canisteo.
Str. Harvey, F. E.
Str. Heiden, Charles.
Str. Homer.
Str. Little, C. H.
Str. McKerchey, J. M.
Str. Mary.
Str. Sachem.
Bge. Whale.

No. 329 United States & Dominion Trans. Co., 205 N. Michigan
Ave., Chicago, Ill.
Str. America.

No. 330 United States Lighthouse Service, Great Lakes District,
Milwaukee, Wis., Detroit, Mich., Buffalo, N. Y.
Str. Amaranth.
Str. Aspen.
Str. Clover.

Str. Crocus.
Str. Hyacinth.
Str. Marigold.
Str. Sumac.

No. 331 Upper Ottawa Improvement Co., Ltd., Ottawa, Ont.

Str. Alexandra.
Str. Castor.
Str. Fraser, Alexander.
Str. Frontenac.
Str. Greene, G. B.
Str. Hamilton.
Str. Hercules.
Str. Potter 2d, G. B.
Str. Pollux.
Str. Powell, C. B.
Str. Wambis.

No. 332 Van Dusen, T. L., Picton, Ont.

Schr. Calkins, Bertie.
Schr. Mowatt, Oliver.

No. 333 Victoria Nav. Co., Ltd., Ottawa, Que.

Str. Victoria.

No. 334 Waffle, T. J. & W. J., Kingston, Ont.

Str. Waffle, T. J.

**No. 335 Walkerville & Detroit Ferry Co., J. Fitzsimmons, Supt.,
Foot Campau St., Detroit, Mich.**

Str. Ariel.
Str. Essex.

**No. 336 Webster Steamship Co., Ltd., 83 Dalhousie St., Quebec,
Que.**

Str. Colen W.
Str. Eric W.
Str. Howard W.
Str. Richard W.
Str. Stuart W.

No. 337 Weddell, R., Trenton, Ont.

Str. Sicken, M.

No. 338 Western Steamship Corp., New York, N. Y.

Str. Oceanica.

- No. 339 Warner, Dorr E., Williamson Bldg., Cleveland, Ohio.
Str. King, Geo.
Bge. Quale, Thomas.
- No. 340 White-Gratwick & Mitchell S. S. Co., N. Tonawanda, N. Y.
Str. Mitchell, G. A.
Bge. Crane, J. L.
Bge. McAvoy, H. J.
- No. 341 White Star Line, Detroit, Mich.
Str. City of Toledo.
Str. Greyhound.
Str. Owana.
Str. Tashmoo.
Str. Waketa.
- No. 342 Williamson, F. Stuart, Receiver Central Railway of
Canada, 103 Francis-Erver St., Montreal, Que.
Str. Empress.
- No. 343 Willoughby, W. J. N., Windsor, Ont.
Str. Fleetwood.
- No. 344 Wills-Lee Co., Detroit, Mich.
Marysville Land Co.
Str. Normandie.
- No. 345 Wilson, Joseph, Montreal, Canada.
Bge. Jackson.
Bge. Gray, John.
- No. 346 Wilson Transit Co., A. W. Thomson, Mgr., 948 Rockefeller
Bldg., Cleveland, Ohio.
Str. Garretson, General.
Str. Hebard, Charles S.
Str. McIntosh, H. P.
Str. Osborne, A. W.
Str. Rees, W. D.
Str. Robbins, S. H.
Str. Taplin, Frank E.
Str. Upson, J. E.
Str. Wilson, Capt. Thomas.
- No. 347 Wilson Lumber & Box Co., P. O. Box 68, Tonawanda, N. Y.
Winnipeg, S. S. Co.
Str. Winnipeg.

- No. 348 Wilson-Patterson Co., Board of Trade, Montreal, Can.
Fairhaven Transp. & Coal Co., Ltd.
Str. Hall, H. B.
Lehigh Coal Co., Ltd.
Str. Canobie.
- No. 349 Windsor & Pelee Island Steamship Co., Ltd., Pelee
Island, Ont.
Str. Pelee.
- No. 350 Wisconsin Dredge & Dock Co., Sheboygan, Wis.
Bge. Helvetia.
- No. 351 Wisconsin Steel Co., Chicago, Ill.
Str. The Harvester.
- No. 352 Wisconsin Transit Co., Milwaukee, Wis.
Str. Pilgrim.
Str. Puriton.
Str. Illinois.
- No. 353 Woodman, Wm. G., Wolfe Island, Ont.
Bge. Acacia.
- No. 354 Wyandotte Transportation Co., Wyandotte, Mich.
Str. Alpena.
Str. Conneaut.
Str. Huron.
Str. Wyandotte.

APPOINTMENTS OF MASTERS

Names of Captains and Their Boats. (*) Star Indicates Member.

Captains of Steamers—

- | | |
|--|---|
| <p>*Anderhalt, L. P.—Chas. M. Warner.
 Ackley, Geo. M.—Malietoa.
 *Ashley, W. A.—R. R. Richardson.
 *Ashby, H.—Bessmer.
 *Allen, Sam'l C.—Jas. A. Farrell.
 *Anderson, G. E.—Argus.
 Allison, M. A.—Tug Margaret Hackett.
 Allison, Wm.—Tug J. J. Hackett.
 *Anderson, M.—E. Y. Townsend.
 *Autterson, Jno. T.—Wm. A. Amberg.
 *Autterson, J. W.—Richard Reiss.
 *Allen, M. G.—Thomas Walter.
 *Atkinson, George—Thos. Shaughnessy.
 *Armstrong, Byron—Owana.
 *Adams, W. G.—Greyhound.
 *Anderson, C. A.—Michigan.
 *Anderson, P. A.—Presque Isle.
 Ames, A. L.—Geo. C. Markham.
 Atkinson, C. A.—Michigan.
 *Atkinson, C. L.—Huron.
 *Albinson, C. R.—Laketon.
 *Autterson, C. J.—C. W. Watson.
 *Alexander, R.—Yorkton.
 *Anderson, S. V.—John Rugee.</p> | <p>Bahle, Esten—Pere Marquette No. 20.
 Blackloch, Frank—David Z. Norton.
 *Bradshaw, J. L.—Alex B. Uhrig.
 *Burns, John—Ziesing.
 *Banker, George H.—Trimble.
 *Burrows, A. W.—N. B. Ream.
 Bowen, George—Widner.
 *Burt, George—Corey.
 *Brown, C. D.—Hill.
 Bernard, E. F.—Murphy.
 Boyce, C. S.—Shiras.
 *Bolhouse, Geo.—Empire City.
 Blessing, G.—Eads.
 *Bouille, Pierre—Smith Thompson.
 *Banker, Geo.—Richard Tremble.
 Butts, W. C.—Geo. B. Leonard.
 *Broderick, Ben.—Wilbur Smith.
 *Brookheyser, Geo.—Florida.
 *Beall, A. R.—Canopus.
 *Brown, Nelson—J. N. Reed.
 *Baird, J. D.—Elba.
 Baker, R. A.—Lupus.
 *Baird, L. M.—Lagonda.
 Burke, Fred—Glenarchy.
 Burke, Roy—Glenlivet.
 Bousette, Frank—Great Western.
 Burns, William—Clifford F. Moll.
 *Brines, J. M.—Replogle.
 *Bourgeois, E. M.—Regulus.
 *Boyce, H. M.—John Oades.
 Brock, George—L. U. Hill.
 *Brines, Sam—W. F. Fitch.</p> |
|--|---|
- Bullock, A. E.—Kelly Island.
 *Balfour, C. C.—Henry K. Oakes.

Captains of Steamers—Cont.

- Bennett, E.—W. G. Pollock.
 Brechsieb, H. C.—W. R. Pringle.
 *Berenstein, J.—Wotan.
 *Buie, Daniel—Thos. Wilson.
 *Baker, B. S.—Tashmoo.
 *Brown, Chas. D.—W. K. Cowan.
 Bostwick, M. E.—Andaste.
 *Buchanan, James—C. G. Beltung.
 Bjork, Oscar—City of St. Joseph.
 Boynton, G. W.—Algomah.
 Blanchard, Geo. W.—Dalhousie City.
 *Barclay, J. C.—Hall.
 *Brownell, J. A.—Hennipin.
 Beaupre, Leo—Keybell.
 Barrett, Albert—Key West.
 *Bouille, David—J. P. Morgan.
 Blair, E. B.—North Star.
 Brown, Robert—Ontario.
 Bickford, Ezra—Oliver H. Perry.
 Baldwin, T. G.—Petoskey.
 Blaine, Archibald—Pleasure.
 Bennett, T. P.—Cletus Schneider.
 *Brown, Hector—Scranton.
 Baker, C. R.—Sonora.
 *Benham, C. A.—Jno. Stanton.
 *Benham, W. P.—J. J. Sullivan.
 Boyle, R. H.—J. F. Taylor.
 *Brown, J. A.—Valcartier.
 *Bennett, Geo. J.—Venezuela.
 Bowen, Geo.—P. A. B. Weidner.
 Berg, Harold—Sailor Boy.
 Carlton, E. E.—Chas. Hubbard.
 Carney, Thos. J.—Hurlburt W. Smith.
 Caughell, Charles. W.—B. Lyman Smith.
 *Collins, Allen—Perkins.
 *Culp, Hamilton—C. A. Black.
 *Conlin, John—Queen City.
 Conlon, L. B.—Mariposa.
 *Call, Richard—Howard M. Hanna, Jr.
 Carlsen, Carl—W. C. Richardson.
 *Clarke, A. A.—Joseph Block.
 *Cannally, James—Andrew S. Upson.
 *Crooker, D. M.—Philip Minch.
 *Craigie, A.—J. P. Reiss.
 Crawford, John—Pere Marquette No. 18.
 *Cavanagh, J. F.—Milwaukee.
 *Conkey, Charles M.—Schiller.
 *Canartney, M.—W. H. Sawyer.
 *Colson, F. A.—C. W. French.
 *Christiansen, Anton—Thos. Davidson.
 *Christiansen, C. O. S.—Nielsen.
 *Cartwright, P. M.—John Sherwin.
 *Cowie, Andrew—Sirius.
 *Cain, Richard A.—Thos. Barlum.
 Campbell, John—Geo. H. Corless.
 *Conlin, T. N.—Clemens A. Reiss.
 *Clawson, Gus.—C. W. Jacobs.
 Clauson, Theo.—Harriet B.
 *Callum, A. C.—W. E. Fitzgerald.
 Cummings, L. B.—J. S. Dunham.
 *Cowles, W. J.—C. H. Bradley.
 Cousins, W. H.—Angeline.
 Carr, Wm.—Ariel.
 *Cody, F. B.—Frank Billings.
 Cottrell, James—Pierce McLouth.
 Collins, O. D.—Penobscot.
 Cunningham, Wm.—Schoolcraft.
 Chamberlain, W. B.—Vulcan.
 Coates, C. B.—Frank Woods.
 Corson, S.—Major.
 *Durker, Henry—Wilkes Barre.
 *Driscoll, J. H.—Norway.

Captains of Steamers—Cont.

- *Dunn, P.—Morse.
- *Davis, F. W.—Maritana.
- *Duddleson, J. Marshall—Fayette Brown.
- *Duddleson, J. W.—M. A. Bradley.
- *Dupule, George—Cepheus.
- *Denike, L. C.—City of Mackinac
- *Duncanson, D. J.—Robert R. Paisley.
- *Detlefs, Emil—Jas. G. Butler, Jr.
- Denstadt, John J.—Columbia.
- Donner, M. K.—J. K. Denmark.
- DeLand, W. A.—F. R. Hazard.
- *Divish, Joe—Mueller.
- *Drury, J. E.—Sonora.
- *Doherty, John—Tionesta.
- *Donahue, Joseph—Troy.
- Dube, John—Waubic.
- *Delaney, Geo.—Wissahicken.
- *Davis, F. J.—Manitoba.

- Elliott, D.—Gates.
- *Endleman, J. G.—Linn.
- *Ernest, Chas. W.—Senator.
- *W. W. Eger—E. A. Uhrig.
- Edwardson, Christ—Chas. Horn.
- *Ehrhart, J. W.—R. L. Ireland.
- Ellis, C. E.—J. S. Ashley.
- *Elliott, Frank—J. C. Ford.
- Endleman, S.—S. Mather.
- *Emerson, S. K.—Calumet.
- *Evanson, Arnold—Pegasus.
- Else, D. B.—Taurus.
- *Emig, Ed.—Pathfinder.
- Elliott, D.—A. E. Cornelius.
- Eble, John—Matthew Wilson.
- *Edwards, J.—S. S. Curry.
- *Emig, Theo.—R. P. Fitzgerald.
- *Emigh, H. W.—F. B. Squires.

- *Evans, R. T.—H. H. Hettler.
- *Elliott, F.—Victoria.
- *Finnegan, H.—Siemens.
- *Forbes, Alex.—A. E. Nettleton.
- *Fox, Benson—Wilpen.
- Fredrickson, Chas.—Ann Arbor No. 4.
- *Fitch, Edward—E. J. Earling.
- Forrest, G. F.—Mary A. McGreg-or.
- *Fox, Arthur J.—Put-in-Bay.
- *Francis, L. J.—H. P. McIntosh.
- Franke, C. H.—J. E. Upson.
- Forbes, A.—Francis Widlar.
- *Fox, Chas.—Marquette.
- *Frilay, H. W.—Amazon.
- Ferguson, Alex.—Belgium.
- *Flaherty, Jos.—C. F. Bellman, Jr.
- Ferrell, P. C.—D. W. Cooke.
- Foot, R. D.—Noconic.
- Forrest, F. D.—Ontario No. 2.
- *Ferguson, Robert E.—Ste. Clair.
- Forbeck, A. P.—Tourist.
- Farrour, Harry—Michigan.

- Galton, Chas. B.—Frank H. Good-year.
- *Galton, John W.—Hugh Kennedy.
- Gell, Howard—Wilbert L. Smith.
- Gegenheimer, Chas.—Williams.
- *Grant, C. J.—McGonagle.
- Grant, Andrew—Crescent City.
- *Gatfield, E. D.—W. A. Paine.
- *Gentz, Otto A.—Wm. Livingston.
- Gunderson, O. G.—Ann Arbor No. 6.
- Gemmell, J. T.—Baker.
- *Girardin, W. L.—Harry W. Croft.
- *Grose, E. D.—City of Detroit No. 2.

Captains of Steamers—Cont.

*Goodrow, F. R.—Wm. H. Truesdale.

Gallagher, Jas.—Griffin.

Gunderson, F.—Ed. Buckley.

Groulx, E.—W. Colean.

Gunderson, Gus.—C. H. Green.

Gordon, W. F.—C. S. Hebard.

*Geel, Guy—Simon Langell.

Geel, Howard—W. L. Smith.

Gary, C. E.—Ogemaw.

*Glockle, M. B.—R. C. Pringle.

*Goodwin, J. F.—Martin Mullen.

Hern, L. J.—Normandie.

Hanson, B. H.—Ann Arbor No. 3.

*Hagan, Wm.—Leonard B. Miller.

*Hansen, A. C.—Gary.

Hunt, F. J.—McDougall.

Hearns, J. L.—Stephenson.

Huckle, G.—Zenith City.

Hettrick, M. E.—Clinton.

Harlotte, H. G.—Kerr.

*Hoag, W. S.—Dickson.

*Hyatt, J. A.—City of Alpena No. 2

*Heffernan, Jas.—Jacob T. Kopp.

*Herbert, Jas. G.—T. H. Wickwire.

*Hayes, Jas. E.—F. R. Buel.

*Heaton, Chas.—John Stanton.

*Hays, J. C.—J. P. Walsh.

Hayman, Geo.—W. Richards.

*Higgle, J.—L. Pallow.

Hudson, A. A.—Glenlyon.

*Hanson, H. C.—Uranus.

*Hanely, C. C.—L. C. Hana.

*Hibbard, C. C.—Alex Maitland.

Henson, J. H.—W. D. Crawford.

*Hartman, A. H.—J. J. Turner.

*Honner, G. W.—Transfer.

Harbarger, H. G.—F. L. Robbins.

Howard, H.—Frank Seither.

*Hansen, Hans—T. S. Christie.

Hamilton, Wm.—A. R. Colborn.

*Hinslea, H.—Sir Trevor Dawson.

Howard, Harry—R. W. England.

Heiser, Henry—Excelsior.

Howard, Frank—Garland.

Hess, J. E.—Mary H.

*Hoxie, A. K.—Pere Marquette No.

4.

*Heffernan, T.—John Rolph.

*Hansen, J. T.—W. H. Wolf.

*Huntoon, F. A.—Detroit.

Hayden, A. W.—Rochester.

*Ivers, John—H. Houghton.

*Iler, W. C.—Crawford.

Johnson, P. A.—F. W. Holt.

Jordon, M. C.—W. C. Franz.

Jack, J.—Fulton.

*Jones, Jno. F.—W. P. Snyder, Jr.

*Jagenow, W.—W. K. Bixby.

*Jaenke, H.—Kearsage.

Jewett, W. J.—John B. Ketchum

No. 2.

*Johnson, R. E.—Venus.

Jackson, Jas.—J. A. Campbell.

Jenkyn, A. M.—Odanah.

*Johnston, Ed.—Vega.

*Jerome, W. B.—Joseph Woods.

*Johnston, Alex.—P. Stackhouse.

Jackson, John—Lansdown.

Jacques, Demase—Brittania.

Jackman, Abner—J. J. Barlum.

*Johnson, Alfred—W. J. Carter.

Joyner, J.—Canadiana.

*Jones, W. C.—J. E. Davidson.

Captains of Steamers—Cont.

- Jones, S. R.—Octorora.
- *Kelley, H. T.—Collins.
 *Kearns, C. J.—Empire City.
 *Kelly, J. W.—H. Steinbrenner.
 Kilby, W. H.—Aug. Ziesing.
 Kennedy, John—Boston.
 Kirkwood, W. J.—Steelton.
 *Kendall, H. J.—C. H. Starke.
- *Leonard, Roy M.—Penobscot.
 LeBeau, C. E.—Philetus Sawyer.
 Leath, E. C.—Superior.
 *LaFramboise, J.—Clemson.
 Lane, Geo. H.—M. Filbert.
 Lohr, Wm.—Maunola.
 *LeRoy, D.—McLean.
 *Landon, Wm.—Peter Reiss.
 *Lyons, R. J.—Horace S. Wilkin-
 son.
- *Lohr, J. M.—Thos. Maytham.
 *Lowes, J. H.—E. A. S. Clarke.
 *Lavelly, L. J.—Hemlock.
 *Lowe, J. B.—Mars.
 Linton, W. E.—Glenfinnan.
 Lavigne, W. A.—Glenshee.
 Lively, H. R.—Hilton.
 *Lightbody, John—Eastern States.
 Low, Gordon—Q. A. Shaw.
 *Landfair, B. M.—D. H. Morrell.
 *Levis, George—W. A. Rogers.
 Langell, Wm.—C. A. Thompson.
 *Lawrence, E. J.—Otto M. Reiss.
 Lawler, F. W.—O. E. Parks.
 Lafay, Wm.—John Otis.
 LaLonde, Oscar—Clemson.
 *Lang, Julius—Renown.
 *Lyons, S. A.—J. H. Sheadle.
 *Logan, J. A.—Australia.
 Lehan, J. J.—Cavanaugh.
- Laverne, Zeno—Doephin.
 Laroche, D. N.—Easton.
 Lefever, E.—Tug Florence!
 Larson, John. A.—M. A. Reeb.
 *Loveless, Fred—Mary H. Boyce.
 *Lockhardt, D. O.—R. C. Wente.
- *Munroe, A. J.—W. P. Snyder.
 Martino, John—Islander.
 *Montgomery, J. D.—Agana.
 *Maddigan, Jas. A.—City of Ban-
 gor.
- *Meeker, S. E.—Palmer.
 Mosher, A. C.—J. W. Gates.
 Mallory, F.—Poe.
 Murray, John—Cornell.
 *Milliken, Wm.—Mataafa.
 Murphy, D.—Maunaloa.
 Millen, R. A.—D. J. Monrell.
 Munsen, J. A.—Fairbairn.
 *Mackey, M. D.—Arizona.
 *Mitchell, Dana—Wm. F. Stifel.
 Moran, Joe—Yosemite.
 Montague, C. Z.—John B. Cowle.
 Meno, Frank L.—E. H. Utley.
 Mahon, Jos. E.—Alaska.
 *Moody, W. H.—Pargny.
 *Matson, S. W.—Victory.
 Murphy, D.—Havard.
 *Morrison, J. N.—Cetus.
 *Mohr, Chas. H.—E. W. Oglebay.
 *Montgomery, Jas. W.—T. H.
 Wickwire, Jr.
 *Montgomery, Jno. A.—W. T. Rob-
 erts.
 *Montgomery, Wm. L.—John. L.
 Bolland.
 *Madden, J. H.—J. S. Morrow.
 *Mahon, A. J.—John J. Barlum.
 Mills, Walter—Cabotta.
 *Milne, John—

Captains of Steamers—Cont.

- Mahon, M. H.—William A. Reiss.
- MacKin, W. J.—Richland Queen.
- *May, E.—John Donaldson.
- Maloney, C. A.—J. W. Follette.
- *Morrison, A.—Edwin N. Ohl.
- Mallette, A.—Ottawan.
- *Merckle, C. G.—City of Toledo.
- *Murphy, H. A.—Ishpeming.
- *Mooney, W. T.—Grand Island.
- *Morrison, W. F.—Negaunee.
- *Maynard, H. N.—Hyacinth.
- *Morgan, M. F.—City of Grand Rapids.
- *Moody, C. E.—Christopher Columbus.
- *Martin, Ed. J.—Allegheny.
- *Moore, Geo. W.—Alpena.
- Mauk, A.—America.
- *Meyers, C. F.—Ashtabula.
- Martin, J.—C. W. Chamberlain.
- Major, Wm. A.—O. D. Conger.
- *Maddock, J. B.—Huron.
- Mullen, John—Key Port.
- *Montgomery, G. A.—Lasalle.
- Matthews, Jos.—N. F. Leopold.
- *Mallette, P. A.—Constitution.
- Murphy, James—J. T. Hutchinson.
- Mullon, J. P.—Midvale.
- Martin, Mike—Pere Marquette No. 8.
- *Morse, A. R.—D. M. Philbin.
- Moles, W. J.—Riverton.
- Murphy, Daniel—Utica.
- *Mac Auley, George—Jas. J. Hoyt.
- *McIntosh, M. G.—A. T. Kinney.
- McCarty, Wm.—Chippewa.
- McIntyre, A.—Homer Smith.
- *McDonald, Alex.—Harvey D. Goulder.
- *McGarrity, D. J.—Carolina,
- McCallum, Geo. W.—Rogers.
- McLeod, H. D.—Edenborn.
- McLeod, D. W.—Black.
- *McDonald, John—Watt.
- *McLachlan, W. H.—Rockefeller.
- *MacDonald, J. J.—Mather.
- *McNeill, W. H.—Jupiter.
- McIntosh, Angus—Neptune.
- McElroy, W. P.—Olcott.
- *McDougal, T. A.—J. R. Jones.
- McRae, Kenneth—Adriatic.
- *McKenzie, K.—Niko.
- *McCann, Hugh—L. R. Davidson.
- *McKay, D.—City of Cleveland.
- *McGarry, George—P. L. Agassiz.
- *McIntosh, J. L.—La Belle.
- *McCarthy, P.—A. G. Bower.
- McIntyre, John—Alberta.
- McLeod, John—Americana.
- McConnell, J.—Assiniboia.
- McKay, Murdock—Athabasca.
- *McLean, Wm. J.—C. D. Bradley.
- *McDonald, A.—M. S. Bacon.
- *McPherson, A.—Chicago.
- *McDonald, W. B.—W. B. Davock.
- *McKenzie, Alex.—Delaware.
- McCoy, N. J.—Manitou.
- McLeod, D.—Milwaukee.
- McCraig, S.—Ontario No. 2.
- *McCorkell, W. H.—Sultana.
- McLean, M. R.—W. F. White.
- *McCormick, J. C.—Wyandotte.
- McPree, W.—Kervatia.
- McIntosh, J. E.—F. C. Osborne.
- *McCallum, A. C.—H. H. Rogers.
- McCarthy, A. F.—G. A. Richardson.
- *McLeod, W. R.—Brazil.
- *Nesbitt, W. K.—Colonel.
- Nahrstedt, John—Dinkey.

Captains of Steamers—Cont.

- *Noble, John—Lynch.
- *Norvell, Walker—Transport.
- Nutting, Ralph—North America.
- *Neville, R.—B. F. Jones.
- Norton, E. R.—General Garreston.
- *Nelson, Olaf—Lewiston.
- Niles, George—Luzon.
- *Nelson, H. J.—P. P. Miller.
- *Neal, J. S.—C. H. McCullough.
- Nelssen, Severn—E. L. Pierce.
- Nicholson, Wm.—Fellow Craft.
- *Nelson, C. O.—Muncy.

- *Ozler, H.—Cort.
- *Ott, Frank H.—Shenango.
- *O'Connor, R.—Hydrus.
- *Oerthling, H., Jr.—Christopher.
- *Ogden, B. F.—Crete.
- Osburn, F. D.—Duluth.
- Ohlemacher, Edw.—Mary Groh.
- *Olson, J. K.—Sumac.

- *Parsons, F. B.—J. F. Dunston.
- Peters, C. E.—Coralia.
- Parke, John—Hoes.
- Patchett, A. T.—Shiras.
- Park, John—F. C. House.
- *Peterson, Martin S. — Harry Yates.
- Pett, Jas. T.—Livingston.
- Palmer, John—City of St. Ignace.
- Price, George W.—Jos Dunn.
- *Peltier, R. D.—E. B. Morris.
- *Parsons, J. W.—Calcite.
- *Pauls, Fred H.—Frank E. Kirby.
- Paula, Bert—Langell Boys.
- Post, D.—James McLaughlin.
- *Perew, F. D.—Pioneer.
- *Page, Geo. H.—Stadacona.
- Patchett, A. T.—Geo. Stephenson.

- *Peterson, P. A.—Corvius.
- Peterson, J. N.—A. M. Gill.
- *Plotter, C. L.—Hoover & Mason
- Patterson, Jas. A.—Marquette & Bessemer No. 1.
- *Powers, J. J.—Fred. Mercur.
- Papineau, A.—Helen C.

- *Quinlan, Wm.—Gogebic.

- Regan, H. J.—Buffington.
- Randolph, Geoge—Cole.
- *Rolfson, J. N.—Phipps.
- *Reece, George—Rensselaar.
- *Rice, Frank—Shaw.
- *Roach, H. D.—Harvey.
- *Rourke, John—Erricson.
- Robertson, C.—Pere Marquette No. 19.
- *Rattray, Chas.—J. P. Donaldson.
- Reed, A. H.—J. C. Morse.
- *Randall, Frank—C. S. Robinson.
- *Reed, W. A.—Amasa Stone.
- *Roubel, W. P.—Perseus.
- *Recor, Ed.—Mecosta.
- Ransom, W. H.—R. R. Rhodes.
- Rogers, W. G.—Edwin L. Booth.
- *Rand, L. A.—J. J. H. Brown.
- Roach, M. B.—C. O. Jenkins.
- *Robinson, J. W.—Sweden.
- *Reid, Frank—Willis King.
- *Robinson, F.—G. J. Grammar.
- *Rinn, Wm.—Parks Foster.
- *Rinn, J. B.—Robbins.
- *Rydholm, C. O.—Munising.
- *Rouvel, P. E.—Central West.
- Randall, W. U.—Argo.
- Robertson, W. P. —Chief Wawatam.

Captains of Steamers—Cont.

- Roberts, B. J.—Chicora.
 *Recor, Geo.—Cygnus.
 *Rathbun, J. E.—Essex.
 *Russell, Henry—Hecla.
 *Reddner, E. E.—Indiana.
 Russell, H. M.—Liberty.
 Rankin, A. E.—A. C. Minch.
 *Ritchie, W. S.—R. P. Ranney.
 *Reid, W. C.—J. T. Hutchinson.
 *Stalker, A. W.—Harry Coulby.
 *Stanley, Edward—Monroe C. Smith.
 *Smith, A. C.—Morgan, Jr.
 Stover, W. E.—Frick.
 *Selee, F. D.—Princeton.
 *Sawyer, E. L.—Superior City.
 Smith, J. A.—Bunsen.
 *Stuffelbeam, G. E.—Alabama.
 *Simmons, T. G.—C. Russel Hubbard.
 *Sullivan, D. C.—Emory L. Ford.
 Stewart, W. J.—Elva.
 Shackett, J. M.—Harlow.
 Stuffelbeam, John—Pere Marquette No. 17.
 *Slade, J. J.—Col. J. M. Shoonmaker.
 *Stewart, H. A.—Wm. C. Agnew.
 *Stewart, H. W.—Matthew Andrew.
 Stoll, A. J.—E. P. Recor.
 Skeeggen, Olaf—W. D. Rees.
 Sullivan, Edward—Midvale.
 *Stewart, M. M.—E. E. Slick.
 *Sturtevant, Fred—W. L. Brown.
 *Sexsmith, S.—E. N. Saunders.
 *Stone, L. W.—Dalton.
 *Smith, S. H.—Moses Taylor.
 Stewart, C. C.—C. C. Wallace.
 *Stockdale, Roy—Indus.
 *Simons, John—Arthur Orr.
 Stewart, Gel.—A. W. Osborne.
 *Saunders, T. H.—Harvey H. Brown.
 *Stevenson, Wm.—Cuyler Adams.
 Spaulding, H. W.—Zillah.
 Swails, G.—Alexis Thompson.
 Smith, Chris.—Wauketa.
 Staker, Wm.—Homer Warren.
 *Stevenson, Thomas—North Lake.
 Stewart, J. A.—Peter White.
 *Sullivan, T. D.—John F. Morrow.
 *Scheible, H. J.—H. B. Nye.
 Smith, E. C.—America.
 Seelye, C. L.—A. A. Augustus.
 *Slater, F. R.—Ball Bros.
 *Stevenson, W. H.—Buffalo.
 Sheldon, A. D.—R. Bottsford.
 Secor, E. B.—A. S. Chisholm.
 Smith, Wm.—Harvester.
 Slattery, Thomas—Juniata.
 Smith, Wm.—Keynor.
 Smith, J. A.—A. F. Harvey.
 Shorkey, W. W.—Sam'l Mitchell.
 Stevenson, Hugh—Sinaloa.
 Sheats, J. N.—Pele.
 *Strahan, L. F.—I. W. Stephenson.
 Sanford, J.—S. M. Stephenson.
 *Smith, J. H.—G. A. Tomlinson.
 Tulledge, B. F.—Ann Arbor No. 5.
 Tyrie, Harry—Arrow.
 Traill, Thomas—Grand Haven.
 *Tullian, G. D.—G. E. Newbold.
 *Tower, John—A. B. Wolvin.
 Tomilon, Fred—Polynesia.
 *Tomlin, W. J.—Uranus.
 Tulloch, Wm.—Rock Ferry.
 Tindale, James—Glenisla.
 *Taylor, Edward—South America.

Captains of Steamers—Cont.

- Trim, Elmer—D. O. Mills.
 *Talbot, A. J.—Roberts, Jr.
 *Thorsen, Louis—L. L. Barth.
 *Thayer, C. R.—Hydro.
 Thompson, W. C.—J. H. Shrigley.
 Treeblay, E.—W. Stuart.
 Taylor, Guy—W. A. Hazard.
 Thomas, E. M.—Hiawatha.
 Toupin, J.—W. Marian.
 *Utey, R. Z.—Saturn.
 VanBuskirk, J.—Marquette & Bessemer No. 2.
 VanDyke, W. H.—Pere Marquette.
 *VanGorden, C.—J. H. Prentice.
 VanPatten, E. C.—Price McKinney.
 *Winkler, H.—A. W. Beyers.
 *Walle, Martin—Stephen M. Clement.
 *Williamson, P. L.—Niagara.
 Williams, M. A.—S. Mather.
 *Woodford, C. H.—Jos. Sellwood.
 *Weeks, J. L.—Arcturus.
 *Warner, W. E.—Houghton.
 *Wendorf, H.—H. F. Black.
 Witte, W.—G. W. French.
 *Walper, H.—Mitchell.
 *Wade, F. J.—Maricopa.
 *Watts, Jas. B.—Lyman C. Smith.
 *Walder, R. J.—Denmark.
 *Willoughy, W. J.—Fleetwood.
 *Wanvig, J. D.—W. H. Wolf.
 *Wilman, D.—W. W. Brown.
 *Weborg, Elmer—Manchester.
 *West, F. A.—Wm. G. Mather.
 *Watson, F. W.—Cadillac.
 *Wilson, C. J., Jr.—Panay.
 *Williams, Ed.—City of Benton Harbor.
 *Warwick, Earnest—G. G. Barnum.
 Wicthem, H. J.—G. A. Boeckling.
 Waugh, Geo.—City of Cheboygan.
 Wright, A. M.—Huronic.
 Wood, F. E.—Kendall, H. J.
 Wilkinson, R. B.—North Sea.
 Wilkin, Clifford—Sapho.
 Williams, Peter—Victoria.
 *Warwick, Geo. A.—Sierra.
 *Woodford, Roy—W. R. Stafford.
 Young, Alex.—J. P. Ralph.
 *Yates, W. H.—Conneaut.

ALPHABETICAL LIST OF OWNERS OR MANAGERS

Captains of Steamers—

- Argus—G. E. Anderson.
Amberg, W. A.—Jno. T. Auttersson.
Ann Arbor No. 4—Chas. Frederickson.
Ann Arbor No. 3—H. B. Hanson.
Ann Arbor No. 6—O. G. Gunderson.
Arizona—M. D. Mackey.
Agana—J. D. Montgomery.
Alaska—Jos. E. Mahon.
Adriatic—Kenneth McRae.
Agassiz, P. L.—George McGarry.
Arcturus—J. L. Weeks.
Alabama—G. E. Stufflebeam.
Ann Arbor No. 5—B. F. Tullidge.
Agnew, Wm. C.—Harvey A. Stewart.
Andrew, Matthew—H. W. Stewart.
Angeline—W. H. Cousins.
Andaste—M. E. Bostwick.
Adams, Cuyler—Wm. Stevenson.
Alberta—John McIntyre.
Americana—John McLeod.
Algolah—G. W. Boynton.
Allegheny—Ed. J. Martin.
Alpena—Geo. W. Moore.
Amazon—H. W. Frilay.
America—E. C. Smith.
America—A. Mauk.
Argo—W. U. Randall.
Ariel—Wm. Carr.
Arrow—Harry Tyrie.
Ashley, J. S.—Chas. S. Ellis.
Ashtabula—Chas. F. Meyers.
Assinibola—J. McConnell.
Athabasca—Murdock McKay.
Boyce, Mary H.—Fred Loveless.
Black—D. W. McLeod.
Belgium—Alex. Ferguson.
Black, C. A.—Hamilton Culp.
Barlum, Thos.—Richard A. Cain.
Brown, Fayette—J. Marshall Duddleson.
Bradley, M. A.—John W. Duddleson.
Bunsen—J. A. Smith.
Baker—J. T. Gemmell.
Buell, F. R.—Jas. E. Hayes.
Brown, W. L.—Fred Sturtevant.
Bixby, W. K.—W. Jagenow.
Boland, J. J.—W. L. Montgomery.
Barlum, John J.—A. J. Mahon.
Brazil—W. R. McLeod.
Byers, A. M.—H. R. Winkler.
Benton Harbor, City of—Ed. Williams.
Black, H. F.—H. Wendorf.
Buffington—H. J. Regan.
Bessemer—H. Ashby.
Booth, Edwin L.—Wallace G. Rogers.
Brown, J. J. H.—L. A. Rand.
Brown, Harvey H.—Thomas H. Saunders.
Brower, A. G.—P. McCarthy.
Brown, W. W.—D. Wilman.
Bradley, C. H.—W. J. Cowles.
Breitung, C. G.—James Buchanan.
Ball Bros.—F. R. Slater.
Barnum, G. G.—Earnest Warwick.
Barth, L. L.—Louis Thorsen.
Bielman, C. F., Jr.—Jos. Flaherty.

Captains of Steamers—Cont.

Billings, Frank—F. B. Cody.
 Block, Jos.—A. A. Clarke.
 Boeckling, G. A.—H. J. Witchen.
 Boston—John Kennedy.
 Bradley, C. D.—Wm. J. McLean.
 Britannia—Demase Jacques.
 Buckley, Ed.—F. Gunderson.
 Buffalo—W. H. Stevenson.
 Butler, Jas. G., Jr.—Emil Detlefs.
 Bacon, M. S.—A. McDonald.
 Bangor, City of—James Madigan.
 Barlum, J. J.—Abner Jackman.
 Bottsford, R.—A. D. Sheldon.

Corey—George Burt.

Cowan, W. P.—C. D. Brown.

Corless, Geo. H.—John Campbell.

Canopus—A. R. Beall.

Chisholm, A. S., Jr.—Omar Collins.

Chisholm, A. S.—E. B. Secor.

Cepheus—George Dupuis.

Calumet—S. K. Emerson.

Cornelius, Adam E.—David Elliott.

Crescent City—Andrew Grant.

Craft, W. W.—W. L. Girardin.

Clinton—M. E. Hettrick.

Crawford, W. D.—J. R. Hansen.

Crawford, G. G.—W. C. Her.

Campbell, J. A.—Jas. Jackson.

Clemson—J. LaFramboise.

Clemson—Oscar LaLonde.

Clarke, E. A. S.—J. H. Lowes.

Cowle, John B.—C. Z. Montague.

Constitution—P. A. Mallette.

Columbus, Christopher—C. E.

Moody.

Craft, Fellow—Wm. Nicholson.

Cort—H. Ozler.

Cetus—J. N. Morrison.

Carolina—D. J. McGarrity.

City of Cleveland—D. McKay.

Colonel—W. K. Nesbitt.

Coralia—C. E. Peters.

Calcite—J. W. Parsons.

Cole, Thos. F.—Geo. Randolph.

Cygnus—Robert J. Recor.

Coulby, Harry—A. W. Stalker.

Christopher—H. Oerthling, Jr.

Curry, S. S.—J. Edwards.

Cadillac—F. W. Watson.

Central West—P. E. Rouvel.

Cabotta—Walter Mills.

Canadiana—J. Joyner.

Carter, W. J.—Alfred Johnson.

Chamberlain, C. W.—J. Martin.

Chicago—A. McPherson.

Chippewa—W. C. McCarty.

Chicora—B. J. Roberts.

Chief Wawatam—W. P. Robertson.

Christie, T. S.—Hans Hansen.

Cleveland, City of—E. Hayward.

City of Cheboygan—Geo. Waugh.

Clement, S. M.—Martin Walle.

Colborn, A. R.—Wm. Hamilton.

Colen, W.—E. Groulx.

Columbia—John J. Denstadt.

Cavanaugh—J. J. Lehan.

Conger, O. D.—Wm. A. Major.

Cornell—John Murray.

Conneaut—W. H. Yates.

Cooke, D. W.—F. C. Ferrell.

Claire—R. E. Ferguson.

Corvius—P. A. Peterson.

Crete—B. F. Ogden.

Davidson, Thomas—Anton Christensen.

Detroit, City of, No. 2—E. Grose.

Dimmick, J. K.—M. K. Donner.

Dickson, W. B.—W. S. Hoag.

Davidson, L. R.—Hugh McCann.

Captains of Steamers—Cont.

- Dinke, A. C.—John Nahrstedt.
Denmark—R. J. Walder.
Dunn, Jos.—George W. Price.
Dunston, J. F.—F. B. Parsons.
Donaldson, Jas. P.—Chas. Rattray.
Dalton, H. G.—L. W. Stone.
Dunham, J. S.—L. B. Cummings.
Dalhousie City—G. W. Blanchard.
Davidson, J. E.—W. C. Jones.
Doepkin—Zeno Laverge.
Dawson, Sir Trevor—H. Hinslea.
Davock, W. B.—W. B. McDonald.
Delaware—Alex. McKenzie.
Donaldson, J. A.—E. W. May.
Duluth—F. D. Osburn.
- Erricson—John Rourke.
Eads—G. Blessing.
Elba—J. D. Baird.
Ellwood, I. L.—H. Clegg.
Earling, E. J.—Edward Fitch.
Empire City—Geo. Bolhouse.
Empire City—C. J. Kearns.
Edenborn—H. D. McLeod.
Elva—W. J. Stewart.
Eastern States—John Lightbody.
Easton—D. N. Laroche.
England, R. W.—Harry Howard.
Excelsior—Harry Heiser.
- Farrell, James A.—S. C. Allen.
Fitch, W. F.—Sam Brines.
Florida—Geo. Brookheyser.
Ford, J. C.—Frank C. Elliott.
Franz, W. C.—M. C. Jordon.
Fulton—J. Jack.
Filbert, M.—Geo. H. Lange.
Follette, J. W.—C. A. Maloney.
Frick, H. C.—W. E. Stover.
Fleetwood—W. J. Willoughby.
- Ford, Emory L.—D. C. Sullivan.
French, C. W.—F. A. Colson.
French, G. W.—W. Witte.
Fitzgerald, W. E.—A. C. Collum.
Florence, Tug—E. Lefever.
- Glenarchy—Fred Burke.
Glenlivet—Roy Burke.
Goodyear—Frank H.—Chas. B. Galton.
Gary, E. N.—A. C. Hanson.
Glenlyon—A. A. Hudson.
Glenfinnan—W. A. Linton.
Glenshee—W. A. Lavigne.
Gates, J. W.—A. C. Moser.
Grand Rapids, City of—M. F. Morgan.
Goulder, Harvey D.—Alex. McDonald.
Grand Haven, C. F.—Thos. Traill.
Gates—D. Elliott.
Griffin—Jas. Gallagher.
Glenisla—James Tindale.
Great Western—Frank Bousette.
Grammar, G. J.—F. Robinson.
Garretson, Gen'l—E. R. Morton.
Greyhound—W. G. Adams.
Grand Island—W. T. Mooney.
Garland—Frank Howard.
Gill, A. M.—J. N. Peterson.
Gogebic—Wm. Quinlan.
Green, C. H.—Gus. Gunderson.
Groh, Mary—Ed. Ohlemacher.
- Hackett, J. H.—Wm. Allison.
Hackett, M. A.—M. Allison.
Hackett, J. J., Tug—Wm. Allison.
Hill, J. J.—C. D. Brown.
Hill, L. U.—George Brock.
Hubbard, Chas.—E. E. Carlton.

Captains of Steamers—Cont.

Hanna, Howard M., Jr.—Richard Call.

Harriet "B"—Theo. Clauson.
Horn, Chas.—Chris. Edwardson.
Houghton, H.—John Ivers.
Holt, F. W.—P. A. Johnson.
Hemlock—L. J. Lively.

Hoyt—C. A. McAuley.
Hydrus—R. O'Connor.
House, F. E.—John Parke.
Harvey—H. D. Roach.
Harvey, A. F.—J. A. Smith.
Home Smith—A. McIntyre.
Hubbard, C. Russell—Thos. J. Simons.

Houghton, D.—Wm. E. Warner.
Hyacinth—H. N. Maynard.
Hall—H. C. Barclay.
Harlow—J. M. Schackett.
Harvester—Wm. Smith.
Hazard, F. R.—W. A. Deland.
Hazard, W. A.—Guy H. Taylor.
Hebards, C. S.—W. F. Gordon.
Hecla—Henry Russell.
Helen C.—A. Papineau.
Hennipin—J. A. Brownell.
Hettler, H. H.—R. T. Evans.
Hiawatha—E. M. Thomas.
Hydro—C. R. Thayer.
Hilton—H. R. Lively.
Hoover & Mason—C. L. Plotter.
Huron—J. B. Maddock.
Huron—C. L. Atkinson.
Havard—D. Murphy.
Huronic—A. M. Wright.
Hutchinson, J. T.—James Murphy.
Hutchinson, J. T.—W. C. Reid.

Islander—John Martino.
Indiana—E. E. Redner.

Indus—Roy Stockdale.
Ireland, R. L.—E. W. Erhardt.
Ishpeming—H. A. Murphy.

Jupiter—W. H. McNeill.
Jones, J. R.—T. A. McDougal.
Jenkins, C. O.—M. B. Roach.
Juniata—Thomas Slattery.

Ketchum, John, No. 2—W. J. Jewett.
Kearsage—H. Jaenke.
Kerr, D. G.—H. G. Harbottle.
Kirby, Frank E.—Fred. H. Paula.
Kelly Island—A. E. Bullock.
King, Willis—F. Reid.
Kotcher, C. W.—John Milne.
Kendall, H. J.—F. E. Wood.
Kervatia—W. McPree.
Keybell—Leo Beaupre.
Key Port—John Mallen.
Keynor—Wm. Smith.
Key West—Albert Barrett.

Linn—J. G. Endleman.
Leonard, Geo. B.—W. C. Butts.
Lagonda—L. M. Baird.
Lupus—R. A. Baker.
Livingston, Wm.—Otto A. Gentz.
Langsdowne—John Jackson.
LaSalle—G. A. Montgomery.
LaBelle—J. L. McIntosh.
Lynch, Thos.—John Noble.
Langell Boys—Bert. Paula.
Livingstone—James Pett.
Laughlin, James—D. M. Post.
Luzon—Geo. E. Niles.
Lewiston—Olaf Nelson.
Laketon—C. R. Albinson.
Langell, Simon—Guy Geel.
Leopold, N. F.—Jos. Matthews.
Liberty—H. M. Russell.

Captains of Steamers—Cont.

- Malletoa—G. M. Ackley.
 Murphy, S. J.—E. F. Bernard.
 Minch, Phillip—D. M. Crooker.
 Milwaukee, C. F.—J. F. Cavanaugh.
 Maitland, Alex—C. C. Hibbard.
 Major—Sam Corson.
 Morse, S. F. B.—P. Dunn.
 Maritana—F. W. Davis.
 Mackinac, City of—L. C. DeNike.
 Mather, Sam'l Small—J. Endleman.
 Miller, Leonard B.—Wm. Hagan.
 Mars—J. B. Lowe.
 Mataafa—Wm. Millikin.
 Maunaloa—D. Murphy.
 Montrell, D. J.—B. M. Landfair.
 Maytham, Thos.—J. M. Lohr.
 Mecosta—Ed. Recor.
 Morgan, J. P.—David Bouille.
 Morgan, J. P., Jr.—A. C. Smith.
 Midvale—J. P. Mullon.
 Midvale—Edward Sullivan.
 Mitchell, Samuel—W. W. Shorkey.
 Mills, D. O.—Elmer Trimm.
 Mather, S.—M. A. Williams.
 Mitchell, P.—H. Walper.
 Maricopa—F. J. Wade.
 Mariposa—L. B. Conlon.
 Moll, C. F.—Wm. Burns.
 Manchester—Elmer Weborg.
 Miller, P. P.—H. Nelson.
 Mather—J. J. Macdonald.
 Mather, W. G.—F. A. West.
 Michigan—C. A. Atkinson.
 Marquette—Chas. Fox.
 Munising—C. O. Rydholm.
 Morrow, J. S.—John H. Madden.
 Manuola—Wm. Lohr.
 Morrow, John F.—T. D. Sullivan.
 Manitoba—F. J. Davis.
 Manitou—W. J. McCoy.
 Marian W.—J. Toupin.
 Markhan, Geo. C.—A. L. Ames.
 Marquette & Bessemer No. 1—James A. Patterson.
 Marquette & Bessemer No. 2—J. VanBuskirk.
 Mary H.—J. E. Hess.
 Mercur, Fred—Jas. J. Powers.
 Michigan—Harry Farrow.
 Milwaukee—D. McLeod.
 Minch, A. C.—A. E. Rankin.
 Morse, J. C.—A. H. Reed.
 Mueller—Joe Divish.
 Mullen, Martin—J. F. Goodwin.
 Muncy—Chas. Nelson.
 Morris—R. D. Peltier.
 McGongale—C. J. Grant.
 McGregor, Mary A.—F. G. Forest.
 McDougall—F. J. Hunt.
 McIntosh, H. P.—L. J. Francis.
 McCullough, C. H.—J. S. Neal.
 McKinney, Price—E. C. VanPat-
 ten.
 McLean—R. LeRoy.
 McLouth, Pierce—James Cottrell.
 Norton, David Z.—Frank Black-
 loch.
 Nottingham, Wm.—James Coffey.
 Norway—J. H. Driscoll.
 Nettleton, A. E.—Alex. Forbes.
 Normandie—L. J. Hern.
 Neptune—Angus McIntosh.
 Niko—K. McKenzie.
 Newbold, G. E.—G. B. Tullian.
 Niagara—Patrick Williamson.
 North America—Ralph Nutting.
 Nielsen—C. O. S. Christiansen.
 Negaunee—W. F. Morrison.

Captains of Steamers—Cont.

Noronic—R. D. Foote.
 North Lake—Thomas Stevenson.
 North Sea—R. B. Wilkinson.
 North Star—E. B. Blair.
 Nye, H. B.—H. J. Scheible.

Oakes, Henry K.—C. C. Balfour.
 Oades, John—H. M. Boyce.
 Olcott—M. P. McElroy.
 Odanah—A. M. Jenkyn.
 Otis, John—Wm. Lafay.
 Oglebay, E. W.—Chas. H. Mohr.
 Orr, Arthur—John Simons.
 Ohl, Edwin L.—A. Morrison.
 Osborne, A. W.—G. Stewart.
 Owana—Byron Armstrong.
 Octorora—S. R. Jones.
 Ogemaw—C. E. Gary.
 Ontario—Robert Brown.
 Ontario No. 1—S. McCraig.
 Ontario No. 2—F. D. Forrest.
 Osborne, F. C.—A. C. McCallum.
 Ottawan—A. Mallette.

Pere Marquette No. 20—Esten Bahle.

Perkins, G. W.—Allen Collins.
 Pere Marquette No. 18—John Crawford.

Pegasus—Arnold Evanson.
 Pathfinder—Ed. Emig.
 Put-in-Bay—Arthur J. Fox.
 Pahlow, Louis—John Higgle.
 Parks, O. E.—F. W. Lawler.
 Palmer, W. P.—S. E. Meeker.
 Poe, O. M.—F. Mallory.
 Parguy, E. W.—W. H. Moody.
 Phipps, Henry—J. N. Rolfson.
 Perseus—W. P. Rouvel.
 Princeton—F. D. Sellie.

Pollock, W. G.—E. Bennett.
 Presque Isle—P. A. Anderson.
 Paisley, Robert R.—D. J. Duncan-son.
 Panay—C. H. Wilson, Jr.
 Pioneer—F. D. Perew.
 Pere Marquette—C. E. Roberston.
 Paine, W. A.—E. D. Gatfield.
 Pelee—J. N. Sheats.
 Penobscot—Roy M. Leonard.
 Penobscot—O. D. Collins.
 Pere Marquette No. 4—A. K. Hoxie.
 Pere Marquette No. 8—Mike Martin.
 Pere Marquette—W. H. VanDyke.
 Perry, Oliver H.—Ezra Brickford.
 Petoskey—T. G. Baldwin.
 Philbin, D. M.—A. R. Morse.
 Pierce, E. L.—Severn Nelssen.
 Pleasure—Archibald Blaine.
 Polynesia—F. A. Tomlin.
 Prentice, J. H.—C. VanGorder.
 Pringle, W. R.—H. C. Brechsieb.

Queen City—J. Conlon.

Regulus—E. M. Bourgeois.
 Roberts, W. T.—John A. Montgomery.

Richland Star—J. H. Madden.
 Richland Queen—W. J. Mackin.
 Rockefeller—W. H. McLachlan.
 Rogers, H. H.—A. C. McCallum.
 Rensselaer—J. O. Reece.
 Robinson, C. S.—Frank Randall.
 Rhodes, Robert R.—W. H. Ranson.
 Recor, E. P.—A. J. Stoll.
 Rock Ferry—Wm. Tulloch.
 Roberts, Percival, Jr.—A. J. Talbot.

Captains of Steamers—Cont.

- Richardson, G. A.—A. F. McCarthy.
Richardson, W. C.—Carl Carlsen.
Robbins, F. L.—H. C. Harbarger.
Rees, W. D.—O. Skuggen.
Replogle—J. M. Brines.
Ralph, P. J.—Alex. T. Young.
Ranney, R. P.—W. S. Ritchie.
Riverton—W. J. Moles.
Robbins, S. H.—J. B. Rinn.

Shiras, M. G.—C. S. Boyce.
Smith, Hulburt W.—Thos. J. Carney.
Smith, Lyman B.—Charles W. Caughell.
Schiller, W. B.—Charles M. Conkey.
South America—Edward Taylor.
Sawyer, W. H.—M. Canartney.
Sherwin, John—P. M. Cartwright.
Schlesinger, Fred.—Ole Dyrness.
Senator—Chas. W. Ernest.
Smith, Wilbert L.—Howard Gell.
Smith, Wilbur—Ben Broderick.
St. Joseph, City of—Oscar Bjork.
Snyder, W. P.—J. F. Jones.
Snyder, W. P.—R. S. Munroe.
Stackhouse, P.—Alex. Johnston.
Siemens—H. Finnegan.
Shenango—Frank H. Ott.
Stephenson—J. L. Hearn.
Stephenson, Geo.—A. T. Packett.
Shaw, H. L.—Frank Rice.
Stanton, John—Chas. Heaton.
Stone, Amasa—Wm. Reed.
Sweden—J. W. Robinson.

Smith, Monroe C.—Edward Stanley.
Superior City—E. L. Sawyer.
Shoonmaker, Col. J. M.—J. J. Slade.
Slick, E. E.—M. M. Stewart.
Saunders, E. N.—S. Sexsmith.
Smith, Lyman C.—James B. Watts.
Shaw, Q. A.—Gordon Low.
Smith, Home—A. McIntyre.
Shaughnessy, Thomas—George Atkinson.
Squires, F. B.—H. W. Emigh.
Seither, Frank—H. Howard.
Steinbrenner, H.—J. W. Kelly.
Sirius—Andrew Cowie.
Sheadle, J. H.—S. A. Lyons.
Sumac—John K. Olsen.
Shiras—A. T. Packett.
Sailor Boy—Harold Berg.
Sappho—Clifford Wilkin.
Saturn—R. Z. Utley.
Sawyer, Philetus—C. E. LeBeau.
Schneider, Cletus—T. B. Bennett.
Schoolcraft—Wm. Cunningham.
Scranton—Hector Brown.
Shrigley, J. H.—W. C. Thompson.
Sierra—Geo. A. Warwick.
Sinaloa—Hugh Stevenson.
Sonora—S. R. Baker.
Sonora—J. E. Drury.
Stadacona—Geo. H. Page.
Stafford, W. R.—Roy Woodford.
Stanton, Jno.—C. A. Benham.
Starke, C. H.—H. J. Kendall.
Steelton—W. J. Kirkwood.
Stephenson, I. W.—L. F. Strahan.
Stephenson, S. M.—J. Sanford.
Stuart, W.—E. Treeblay.
Sullivan, J. J.—W. P. Benham.
Sultana—W. H. McCorkell.

Captains of Steamers—Cont.

- Superior—E. C. Leath.
 Tomlinson, G. A.—J. H. Smith.
 Tremble, Richard—Geo. Banker.
 Trimble, Richard—George H. Banker.
 Thompson, Smith—Pierre Bouille.
 Townsend, E. Y.—M. Anderson.
 Taurus—D. B. Elsey.
 Truesdale, Wm. H.—F. R. Goodrow.
 Transfer—G. W. Honner.
 Transport—Walker Norvell.
 Taylor, Moses—S. H. Smith.
 Thompson, Alex.—G. Swails.
 Tashmoo—B. S. Baker.
 Taylor, J. F.—R. H. Boyle.
 Thompson, C. A.—Wm. Langell.
 Toledo, City of—Chas. Merkel.
 Tionesta—John Doherty.
 Tourist—A. P. Forbeck.
 Turner, J. J.—A. H. Hartman.
 Troy—Joseph Donahue.
 Ubrig, Alex B.—J. L. Bradshaw.
 Upson, Andrew S.—Jas. Cannalley.
 Ubrig, E. A.—W. W. Eger.
 Utley, E. H.—Frank L. Meno.
 Upson, J. E.—C. H. Francke.
 Uranus—W. J. Tomlin.
 Utica—Daniel Murphy.
 Venus—R. E. Johnson.
 Vega—Ed. Johnston.
 Victory—S. W. Matson.
 Venezuela—Geo. E. Bennett.
 Valcartier—J. A. Brown.
 Verona—J. B. Lyons.
 Victoria—F. Elliott.
 Victoria—Peter Williams.
 Vulcan—W. B. Chamberlain.
 Weldner, P. A. B.—Geo. Bowen.
 Wilson, Thomas—Daniel Bowle.
 Warner, Chas.—L. P. Anderhalt.
 Wilkes Barre—Henry Durker.
 Wilson, Matthew—John Eble.
 Wilpen—Benson Fox.
 Williams, H. D.—Chas. Gengheim.
 Watt, Jas.—F. J. Hunt.
 Wickwire, T. J.—James J. Herbert.
 Woods, Joseph—W. B. Jerome.
 Wilkinson, Horace S.—R. J. Lyons.
 Western States—S. O. Robinson.
 Wallace, C. C.—C. C. Stewart.
 Wolvin, A. B.—John Tower.
 Wolf, W. H.—J. D. Wanvig.
 Wotan—J. Berenstein.
 Wickwire, Jr.—J. W. Montgomery.
 Widlar, Francis—A. Forbes.
 Walters, Thomas—M. Allen.
 Wauketa—Sam Christan.
 White, Peter—J. A. Stewart.
 Waubic—John Dube.
 Walsh, J. P.—J. C. Hays.
 Warner, Homer—Wm. Stalker.
 Watson, C. W.—C. J. Auttersen.
 Wente, R. C.—D. O. Lockhardt.
 White, W. F.—M. R. MacLean.
 Wissahicken—Geo. Delaney.
 Wolf, W. H.—J. T. Hansen.
 Weidener—Geo. H. Brower.
 Woods, Frank—C. B. Coates.
 Wyandotte—J. C. McCormick.
 Yates, Harry—Martin S. Peterson.
 Yorkton—R. Alexander.
 Ziesing—John Burns.
 Ziesing, Aug.—W. H. Kilby.
 Zillah—H. W. Spaulding.
 Zenith City—Geo. N. Nuckle.

Names of Captains and Their Boats

Captains of Barges—

Ames, J. N.—Marsala.

Abbott, Geo.—Sherman.

Benson, C.—Jenney.

Birkeland, Theo.—J. I. Case.

Booth John—Mingo.

Briggs, R.—Dayton.

Brown, John—Thomas.

Bennett, L. D.—Mary Woolson.

Brown, R.—Sophia Minch.

Burns, Richard—J. B. Lozen.

Brachman, Chas.—Oak Leaf.

Campbell, John—Corliss.

Christopherson, Carl M.—Marcia.

Campbell, Don—Peshtigo.

*Colson, F. A.—Alex Maitland.

Call, Earnest L.—Ashland.

*Christopher, Sam—R. L. Fryer.

Donald, Wm.—Maida.

*Duncan, V. W.—Owen.

Dick, W. H.—Nasmyth.

Daraway, Henry—J. B. Merriell.

Erickson, James—Ashland.

Ellingsen, Jensen—Our Son.

Graham, Donald—Roebling.

Glessner, Matt—Ida Corning.

*Gustafson, P.—Krupp.

Gordon, Chas.—Manda.

Graham, Colin—L. M. Davis.

Gordon, John—Nellie Redington.

Giddings, E. H.—Daisy Richland.

Goodleib, P. F.—J. H. Stevens.

*Hand, A. S.—Magna.

Hammel, Wm.—Norman Kelley.

Hagerty, J. F.—C. J. Filmore.

Johnson, W. P.—C. E. Redfern.

Jacques, Eli—Tuxbury.

Keenan, W. J.—Arthur.

Kelly, Wm.—J. H. Pellatt.

King, A. B.—A. B. King.

Larsen, Iver—Bell.

Larsen, Iver—137.

Leduc, L.—Gladys "H."

Leduc, T. L.—J. Godfrey.

Leboeuff, Patrick—"A." "B."

Lindberg, Edward—Holley.

Lawrence J.—Thomas Gawn.

LeBocuf, Sam—F. A. Georges.

Malloney, George—Manilla.

*Mallette, P. A.—Constitution.

Mattison, John—S. J. Tilden.

Monet, A. D.—Zapotec.

Mills, Alex.—Crete.

*McDonald, Wm.—Maida.

McGrath, Ralph—Delta.

McCormick, Alex.—Goshawk.

McManus, P.—D. P. Dobbins.

*Nordahl, A.—Bryn Mawr.

Ohman, J. H.—Sagamore.

Olsen, Alfred—W. L. Kennedy.

Peltier, Burt.—Golden Age.

Captains of Barges—Continued White, H. M.—Fritz.
Peterson, A. K.—J. A. Francombe. *Wilson, C. L.—Martha.
Poirer, P.—Katie H. Williamson, A. W.—S. Wright.
Robenson, J. O.—A. B. Norris. Woodworth, T. K.—Tyrone.
Saveland, H. M.—Carrington. Young, George—Maia.
Sommerville, Wm.—D. G. Cutler.

Names of Boats and Their Captains

Captains of Barges—

Ashland—James Erickson.
Arthur—W. J. Keenan.
Ashland—Earnest Call.

Bell—Iver Larsen.
Bryn Mawr—A. Nordahl.

Corliss, Geo.—John Campbell.
Constitution—P. A. Mallette.
Carrington—H. M. Saveland.
Case, J. W.—Theo. Birkeland.
Corning, Ida—Matt Glessner.
Crete—Alex. Mills.
Cutler, D. G.—Wm. Somerville.

Dayton—R. Briggs.
Delta—Ralph McGrath.
Davis, L. M.—Colin Graham.
Dobbins, D. P.—P. McManus.

Fritz—H. M. White.
Filmore, C. J.—J. F. Hagerty.
Francomb, J. A.—K. Peterson.
Fryer, R. L.—Sam Christopher.

Gladys "H."—L. Leduc.
Golden Age—Burt. Peltier.
Goshawk—Alex McCormick.
Gawan, Thomas—J. Lawrence.
Godfrey, J.—T. L. Leduc.
Georges, F. A.—Sam Lebouef.

Holley—Edward Lindberg.

Jenney—C. Benson.

Katie H.—P. Poirer.
Krupp—P. Gustafson.
Kelly, Norman—Wm. Hammel.
Kennedy, W. L.—Alfred Olson.
King, A. B.—A. B. King.

Lozen, J. B.—Richard Burns.

Marsala—J. N. Ames.
Mingo—John Booth.
Marcia—Carl M. Christopherson.
Maids—Wm. McDonald.
Manda—Chas. Gordon.
Magna—A. S. Hand.
Manilla—George Malloney.
Martha—C. L. Wilson.
Mala—George Young.
Maitland, Alex.—F. A. Colson.
Merrill, J. B.—Henry Daryow.
Minch, Sophia—R. Brown.

Naysmith, James—W. H. Dick.
Norris, A. B.—J. O. Robenson.

Our Son—Jensen Ellingsen.
Owen—V. W. Duncan.
Oak Leaf—Chas. Brachman.

Pellatt, J. H.—Wm. Kelley.
Peshtigo—Don Campbell.

Roebbing—Donald Graham.
Redington, Nellie—John Gordon.
Redfern, C. E.—W. P. Johnson.
Richland, Daisy—E. H. Giddings.

Sagamore—J. H. Ohman.

Captains of Barges—Continued Tyrone—T. K. Woodworth.
Sherman, W. A.—Geo. Abbett. Woolson, Mary—L. D. Bennett.
Stevens, H. J.—P. F. Goodleb. Wright, S.—A. W. Wilkinson.
Thomas—John Brown. Zapotec—A. D. Monet.
Tuxbury—Eli Jacques. 137—Iver Larsen.
Tilden, S. J.—John Mattison. A. D.—Patrick Leoboef.

COAL DOCKS OF THE GREAT LAKES

ALGOMA, WIS.

Algoma Fuel Co.—

Capacity 500 to 600 tons per day.
 Draft of water 12 to 14 feet.
 Maximum length boat can handle
 at dock, 300 feet.
 Supt. H. Grimm.

ALPENA, MICH.

Alpena Coal Co.—

Capacity per day 300 tons.
 Draft of water 15 feet.
 Can handle 450 foot boats.
 Supt. Thomas P. Monaghan.

Bedford & Co., M. N.—

Capacity per day 600 tons.
 Depth of water 15 feet.
 Can handle boats of any length.
 Supt. J. L. Reed.

Fletcher Paper Co.—

Capacity per day 600 tons.
 Depth of water 15 feet.
 Maximum length of boat 370 feet.

AMHERSTBURG, ONT.

Mullen Coal Co.—

Lower end of Detroit River.
 Capacity per 10 hours 600 tons.
 Depth of water at dock 20 feet.
 Supt. Duerson Gatfield.

ASHLAND, WIS.

Clarkson Coal & Dock Co.—

Capacity per 10 hours on large
 boats 2,000 tons; small boats
 1,500 tons.

Depth of water 20 feet.
 Maximum length of boat 620 feet.
 Supt. Frank G. Johnson.

Pittsburgh & Ashland Coal & Dock Co.—

Capacity per 10 hours 1,500 tons.
 Depth of water 19 feet 6 inches.
 Maximum length of boat 440 feet.
 Supt. Francis Hogan.

Relis Coal Co., C. (C. N. & W.)—

Capacity per day 3,500 tons.

Depth of water 18 feet.

Supt. M. Schrank.

ASHTABULA HARBOR, OHIO

Lower Lake Dock Co.—

Leader-News Bldg., Cleveland, O.
 McMyler Car Dump (West Side).
 Supt. J. M. Amsden.

Pittsburgh Coal Co. (Pennsylvania No. 11)—

McMyler Car Dump (West Side).
 Supt. Tom Kirby.

Pittsburgh Coal Co. (Lake Shore No. 9)—

McMyler Car Dump (East Side).
 Supt. Robt. W. Dingee.

Pickands-Mather & Co.—

McMyler Car Dump (East Side).
 Supt. E. O. Whitney.

BAY CITY, MICH.

Central Coal Co.—

Capacity per 10 hours 600 tons.
 Depth of water at dock 12 to 15
 feet.

Supt. F. W. Braman.

C. M. Clute—

Capacity per 10 hours 300 tons.
 Depth of water at dock 13 feet.
 Can handle boats of any size.

BEAVER ISLAND, MICH.

James McCann—

Boat to do the holsting.
 Capacity about 250 tons.

BELLEVILLE, ONT.

N. Allens Dock—

Capacity per 10 hours 250 tons.
 Depth of water at dock 11 feet.
 Supt. N. Allen.

F. S. Anderson Co.—

Capacity per 10 hours 200 tons.
 Depth of water at dock 10 feet.
 Supt. A. T. Howe.

Downey Coal Co.—

Capacity per 10 hours 225 tons.
 Depth of water at dock 10 feet.

Schuster Co.—

Capacity per 10 hours 225 tons.
Depth of water at dock 11 feet.
Supt. Wm. Lindsay.

BIG TRAVERSE BAY, MICH. (See Mohawk, Mich.)**BLIND RIVER, ONT.****Eddy Brothers & Co., Ltd.—**

Storage capacity 400 tons.
Depth of water 12 feet 6 inches.
Supt. J. R. Stover.

Government Dock—

W. H. McGauley operator.
Unload with wheel barrows.
Capacity per 10 hours 150 tons.
Depth of water at dock 16 feet.
Maximum length boat 400 feet.

BRUCE MINES, ONT.**Martin International Trap Rock Co.—**

Storage capacity 75,000 tons.
2 Belt conveyors, 80 feet apart.
Capacity per 10 hours, both conveyors, will be about 20,000 tons.
Height of spout from water 45 feet.
Height of dock from water 15 feet.
Length of spout 15 feet.
Length of dock 180 feet.
Depth of water at the dock 21 feet.
Supt. W. S. Edward.

BUFFALO, N. Y.**Restof Mining Co. (Salt Shippers)—Scranton, Pa.**

Salt loaded over Erie Trestle.

Sterling Salt Co.—

29 Broadway, N. Y. City.
Loaded at W. J. Connors Dock Ohio Basin.
Depth of water at dock 13 feet.
Capacity per day 300 tons.

D. L. & W.—

Coal trestle.
Supt. G. W. Burke.

Erie R. R.—

Coal trestle.
Supt. Dan Coughlin.

Lehigh Valley—

Coal trestle, maximum beam of boat 54 feet, length 525.

P. & R. Coal & Iron Co.—

Coal trestle. Buffalo, N. Y.
Supt. H. H. Lywell.

STEEL RAIL LOADING DOCKS**Lehigh Valley Dock—**

Capacity per 24 hours 1,500 tons.
Can load any length boat.
Maximum beam of boat 52 feet.
Depth of water at dock 19 feet.

Lackawanna Steel Co.—

Capacity per 24 hours 3,300 tons.
Can load any length boat.

BYNG INLET, ONT.**Canadian Pacific Railway—**

Capacity per 10 hours 2,500 tons.

CALCITE, PRESQUE ISLE CO., MICH.**Michigan Lime Stone & Chemical Co.—**

48 inch conveyor belt used for loading.
Storage capacity 30,000 tons.
Depth of water at dock 21 feet.

CHARLEVOIX, MICH.**McArthur's Dock (M. D. Olds, Prop.)—**

Capacity per day 500 tons.
Depth of water 16 feet.
Maximum length of boat 300 feet.
Supt. R. E. Matt.

CHICAGO, ILL. (North Branch)

(See South Chicago also.)

Consumers Co. (Consumers Bldg.)—Webster Ave. Bridge.

North Branch.
Capacity per 10 hours 1,500 tons.
Depth of water at dock 18 feet.
Can handle 350 foot boat.
Supt. John Arndt, Jr.

Hedstrom-Schenck Coal Co. (D. L. & W.)—

Capacity per ten hours 2,500 tons.
Depth of water at dock 13 feet.

Eureka Coal and Dock Co. (1509**Cortland St.)—****Cortland St. Bridge.****Capacity 250 tons per hour.****Depth of water 22 feet.****Maximum length of boat 300 feet.****Supt. A. T. Sivyver.****Lill-Robinson Coal Co.—****Capacity per 10 hours soft coal
2,400 tons.****Capacity per 10 hours hard coal
3,000 tons.****Depth of water 20 feet.****Supt. W. W. Lill.****Hedstrom & Co., E. L. (North
Ave.)—****Capacity per day 2,000 tons.****Depth of water 18 feet 6 inches.****Maximum length of boat 465 feet.****Maximum beam of boat 54 feet.****Supt. Wm. Rhodes.****Lehigh Valley Coal Sales Co.—****Capacity per day 2,000 tons.****Depth of water 20 feet.****Maximum length of boat 408 feet.****Supt. A. Wallace.****Gruschow, Robert H. (L-V) Clybourn
Ave.****Capacity per ten hours 2,000 tons.****Depth of water at dock 20 feet.****Supt. Wm. C. Krueger.****Lehigh Valley Coal Sales Co.—****Chicago Ave. Dock.****Capacity per day 2,000 tons.****Depth of water 20 feet.****Maximum length of boat 400 feet.****Supt. A. Wallace.****Lill-Robinson Coal Co.—****Chester St. Dock.****Capacity per 10 hours soft coal
2,400 tons.****Capacity per 10 hours hard coal
3,000 tons.****Depth of water 20 feet.****Maximum length of boat 325 feet.****Supt. W. W. Lill.****Philadelphia & Reading Coal & Iron
Co.—****N. Halsted St. Dock.****Capacity per 10 hours 800 tons.****Pittsburgh Coal Co. (Fuel Dock)—
North Pier Dock.****Capacity per 10 hours 1,000 tons.****Depth of water 20 feet.****Maximum length of boat 400 feet.****Supt. A. J. Hitchcock.****Richardson Coal Co., O. S.—****North Branch, "Elston Avenue
Dock."****Capacity per 10 hours 3,500 tons.****Depth of water at dock 22 feet.****Maximum length of boat 550 feet.****Scheunemann & Co., O. F.—****Division St.****Capacity per 10 hours 750 tons.****Schenck Co., S. C. (D. L. & W.)—****Division St.—Goose Island.****Capacity per ten hours 2,500 tons.****Depth of water 19 feet.****Maximum length of boat 500 feet.****Supt. J. C. Karman.****SOUTH BRANCH. (Chicago River)****Schenck Co., S. C. (D. L. & W.)—
35th St. Dock.****Capacity per 10 hours 2,500 tons.****Depth of water 18 feet 6 inches.****Can handle boats of any length.****Maximum beam of boat 52 feet.****Supt. Hugh P. Moran.****CHICOUTIMI, QUEBEC****Price Brothers & Co., Ltd.—****Saguenay River.****Capacity per 10 hours 600 tons.****Depth of water at dock 15 feet.****Maximum length of boat 250 feet.****Supt. J. McD. Grosart.****CLEVELAND, OHIO****Pittsburgh Coal Co. (Cuddy-Mul-
len)—****McMyler Car Dump, 1st Machine.****Supt. A. A. Wedow.****Ellsworth & Co., J. W.—****McMyler Car Dump, 2d Machine.****Supt. P. Gallagher.****East Pier Dock Co.—****Capacity per 10 hours 600 tons.****Depth of water at dock 20 feet.****Supt. P. Gallagher.****Pennsylvania—****McMyler Car Dump, 3d Machine.****Supt. P. Gallagher.**

Pittsburgh Coal Co. (Irishtown)—
Wellman-Seaver Car Dump
(Above Viaduct).

Supt. Mike McCarthy.

Pittsburgh Coal Co. (West Side Fuel Dock)—

Supt. W. P. Bennett.

COLLINGWOOD, ONT.

Collingwood Packing Co.—

West Side of the Harbor.

Capacity per 10 hours 400 tons.

Depth of water at dock 16 feet.

Length of boat can reach dock 400 feet.

Supt. John Bannan.

Collingwood Ship Building Co., Ltd.—

Capacity per 10 hours 300 tons.

Depth of water at dock 16 feet.

Can handle boats of any length.

Northern Navigation Co.—

One Steam Holst.

Capacity 400 tons.

COURTRIGHT, ONT.

Western Salt Co., Ltd.—

One-half mile below Courtright.

Capacity per 10 hours 450 tons.

Depth of water at dock 19 feet.

Maximum length of boat 300 feet.

Supt. W. A. Leach.

DE PERE, WIS.

American Writing Paper Co.—

Depth of water 15 feet.

Maximum length of boat 500 feet.

Supt. J. S. Gittins.

De Pere Co-Operative Coal Co.—

Capacity per day 500 tons.

Depth of water 15 feet.

Maximum length of boat 250 feet.

Supt. H. Barlament.

Wells Co., A. G.—

Capacity per day hard coal 900 tons.

Capacity per day soft coal 500 tons.

Depth of water 15 feet.

Maximum length of boat 300 feet.

Foreman, W. S. Altmayer.

DEPOT HARBOR, ONT.

Grand Trunk Ry. Co.—

Capacity per 10 hours 1,300 tons.

Depth of water 21 feet.

Maximum length of boat 500 feet.

A. J. Brett, Agent.

DETOUR, MICH.

Detour Dock Co.—

Pickands-Mather & Co., Cleveland, Ohio.

Capacity per 10 hours 2,500 tons.

16 pockets, capacity 2,000 tons.

Depth of water at dock 23 feet.

Can handle boats of any length.

Fuel dock exclusively.

W. H. Lewis, Agent.

Valley Camp Fuel Dock—

One McMyler.

Capacity per 10 hours 500 tons.

Depth of water 21 feet.

Maximum length of boat 600 feet.

Fueling dock also.

DESERONTO, ONT.

Canada Cement Co., Ltd.—

Capacity per 10 hours 600 tons.

Depth of water at dock 14 feet.

Can handle boats of any length.

Supt. Elmor French.

Rathbun Co.—

Capacity per 10 hours 300 tons.

Depth of water at dock 12 feet.

Supt. H. B. Sherwood, Napanee,

Ont.

DETROIT, MICH.

United Fuel & Supply Co. (Formerly

Stanley B. Smith & Co.)—

12 Overhead pockets, 600 tons capacity.

Fueling capacity 300 tons per hour.

Capacity per 10 hours 700 tons.

Depth of water at dock 25 feet.

Mgr. J. M. McKerchey.

Fueling station.

Water Works—

Depth of water 13 feet.

Capacity per day 350 tons.

DOLLAR BAY, MICH.

Tamarack Mining Co. (Union Dock)—

Capacity per 10 hours 3,000 tons.

Depth of water 19 feet 6 inches.

Can handle boats of any length.

Supt. Hugh Moore.

Tamarack Oseola Copper Mfg. Co.
(Wire MNI Dock)—
Capacity per 10 hours 450 tons.
Depth of water 20 feet.
Can handle boats of any length.
Supt. F. W. Foley.

DULUTH, MINN.

Berwind Fuel Co. (Dock No. 2)—
West Duluth Dock.
Capacity per 10 hours 10,000 tons.
Depth of water at dock 22 feet.
Can handle boats of any length.
Supt. W. K. Link.

Carnegie Fuel Co., Dock No. 2 (Bituminous)—
Capacity per 10 hours 5,000 tons.
Can handle any size boat.
Depth of water about 20 feet.
Supt. B. McNamara.

Carnegie Fuel Co., Dock No. 2 (Anthracite)—
Capacity per 10 hours 5,000 tons.
Depth of water about 22 feet.
Supt. B. McNamara.

Clarkson Coal & Dock Co.—
Rices Point, between Capital & Consolidated Elevators.
Capacity per 10 hours 3,000 tons.
Capacity per 10 hours 2,000 tons.
Depth of water at dock 20 feet.
Can handle any size boat.
Supt. J. J. Davidson.

Cutler & Co., D. G. (Stone Dock)—
Located in Slip No. 5.
Capacity per 10 hours 1,400 tons.
Depth of water 17 feet.
Maximum length of boat 300 feet.
Supt. D. Ridgewell.

Duluth, Missabe & Northern Ry. Co.—
Capacity per 10 hours 12,000 tons.
Depth of water 22 feet.
Can handle boats of any length.
Supt. C. H. Fugle.

Island Creek Coal Dock Co., Dock No. 1—
St. Louis River, West Duluth.
Capacity per 10 hours 6,000 tons.
Depth of water at dock 24 feet.
Supt. A. W. Fay.

North Western Fuel Co.—
Foot of 5th Ave.
Capacity per 10 hours 2,500 tons.
Depth of water 18 feet.
Can handle boats of any length.
Supt. A. C. Jones.

North Western Fuel Co., Dock No. 6 (Pgh. No. 1)—
Capacity per 10 hours 10 rigs 5,000 tons.
Depth of water at dock 19 feet.
Maximum length of boat 600 feet.
Supt. A. C. Jones.

Pittsburgh Coal Co. (Dock No. 7)—
Capacity per 10 hours 3,000 tons.
Depth of water at dock 20 feet.
Maximum length of boat 600 feet.
Supt. Chas. Gallagher.

Zenith Furnace Co.—
Capacity per 10 hours 6,500 tons.
Depth of water at dock 22 feet.
Can handle boats of any length.
Supt. F. C. Harris.

EMPIRE, MICH.

J. Wilcox Co. (Empire Lumber Co.)—
Depth of water at dock 14 feet.
Can handle boats of any length.
Supt. E. R. Dailey.

ERIE, PA.

Y. & O. Coal Co.—
McMyler Car Dump.
Hammermill Paper Co.—
Capacity per day 800 cords.
Depth of water at dock 18 feet.
Can handle any length boat.
Supt. E. Held.

ERIEAU, ONT.

Lake Erie Navigation Co.—
Capacity per 10 hours 2,000 tons.
Depth of water at dock 20 feet.
A. Leslie, Gen. Mgr.

ESCANABA, MICH.

Central Coal Co. (C. M. & St. P.)—
Capacity per 10 hours 2,000 tons.
Depth of water at dock 25 feet.
Can handle boats of any length.
Supt. J. Earling.

Reiss Coal Co., C. (C. & N. W.)—
Capacity per 10 hours 2,500 tons.
Depth of water at dock 20 feet.
Can handle boats of any length.
Supt. S. R. Wickham.

FAIRPORT, OHIO

Pittsburgh Coal Co.—
McMyler Car Dump.
Supt. A. G. Miltner.

FAIR HAVEN, N. Y.

Lehigh Valley Coal Trestle—
Supt. R. L. Gebhardt.

FORT WILLIAM, ONT.

Canadian Pacific Ry. Co.—
Capacity per 10 hours 6,500 tons.
Depth of water at dock 22 feet.
Can handle boats of any length.
Supt. O. Peterson.

Canadian Pacific Ry. Co.—
Capacity per 10 hours 700 tons.
Depth of water at dock 22 feet.
Supt. O. Peterson.

Canadian Pacific Ry. Co. (Island Dock)—
Capacity per 10 hours 8,500 tons.
Depth of water at dock 22 feet.
Can handle boats of any length.
Supt. O. Peterson.

Fort William Coal Dock Co.—
Capacity per 10 hours 5,000 tons.
Depth of water at dock 20 feet.
Can handle boats of any length.
Supt. G. A. Benson.

Murphy, James—
Kaministiquia River.
Capacity per 10 hours 1,400 tons.
Depth of water at dock 20 feet.
Can handle any size boat.

Steel Rail Unloading Docks—
Canadian Pacific Railway.
Grand Trunk Pacific Railway.
Canadian Northern Railway.

GARY, IND.

Indiana Steel Co. (Rail Loading Dock)—
Capacity 2,400 tons in 48 hours.
Depth of water at dock 20 feet.

GLADSTONE, MICH.

Pittsburgh Coal Co.—
Capacity per 10 hours 3,000 tons.

Depth of water at dock 20 feet.
Can handle boats of any length.
Supt. Peter Peterson.

GOAT ISLAND, ONT.

Algoma Eastern Terminals—
North side of Little Current Channel.
Capacity per 10 hours 2,000 tons.
Depth of water at dock 22 feet.
Maximum length of boat 350 feet.
Supt. T. F. Rahilly.

GODERICH, ONT.

Electric Light Plant—
Capacity per day 225 tons.
Goderich Elevator & Transit Co.—
Capacity per day 300 tons.
Depth of water at dock 18 feet.
Maximum length of boat 300 feet.
Supt. G. L. Parsons.
Western Canada Flour Mill Co., Ltd.—
Capacity per 10 hours 500 tons.
Capacity 10 hours 300 tons.
Depth of water at dock 18 feet 6 inches.
Length of boat can reach dock 300 feet.
Supt. R. J. Megaw.

GREEN BAY, WIS.

Central Coal Co. (C. M. & St. P.)—
Capacity per 10 hours 2,000 tons.
Depth of water at dock 18 feet and 6 inches.
Can handle boats of any length.
Supt. Henry Stange.

Interstate Coal & Dock Co.—
Capacity per day 3,000 tons.
9,000 tons 35 hours.
Depth of water at dock 18 feet and 6 inches.
Can handle boats of any length.
Supt. H. L. Fiedler.

Barkhausen Retail Dock, H. A.—
Capacity per 10 hours 700 tons.
Depth of water at dock 18 feet and 6 inches.
Maximum length of boat 300 feet.
Huribut Co., F.—
Capacity per day 500 tons.
Depth of water at dock 18 feet.

Maximum length of boat 650 feet.
Supt. A. Francois.

Reiss Coal Co., C.—

Capacity per 10 hours 4,000 tons.
Depth of water at dock 18 feet 6 inches.
Can handle boats of any length.
W. B. Gueinzirus, Mgr.

GROSSE POINT, MICH.

P. O. Address, Point Mills, Mich.
Arcadian Mining Co.—

Capacity per day 300 tons.

Asphalt Block Pavement Co. (Sand Dock)—

Loading capacity 3,000 tons per 10 hours.
Depth of water at dock 21 feet.
Supt. Henry F. Key, Hancock, Mich.

Franklin Mining Co.—

Capacity per day 700 tons.
Depth of water at dock 20 feet.
Supt. E. S. Warne.

HANCOCK, MICH.

City Dock (Water Works)—

Capacity per day 500 tons.
Depth of water at dock 18 feet.

Houghton County Traction Co.—

Capacity per day 400 tons.
Depth of water at dock 19 feet.
Supt. John Ralph, Jr.

People's Fuel Co.—

Capacity per 10 hours hard coal 1,200 tons.

Capacity per 10 hours soft coal 800 tons.

Depth of water at dock 19 feet 6 inches.

Maximum length of boat 310 feet.
Supt. Richard Vincent.

Portage Coal & Dock Co.—

Capacity per 10 hours 2,500 tons.
Depth of water at dock 19 to 22 feet.

Can handle boats of any length.
Supt. J. H. Hicok.

Portage Lake Foundry & Machine Co.—

Capacity per day 300 tons.
Depth of water at dock 18 feet.

Maximum length of boat 400 feet.
Supt. L. M. Cleaves.

Mineral Range Railroad Co.—

Capacity per 10 hours 1,000 tons.
Depth of water at dock 15 feet.
Maximum length of boat 300 feet.
Supt. T. W. Smith, Calumet, Mich.

Quincy Smelting Co.—

Capacity per day 600 tons.

HOUGHTON, MICH.

Copper Range Railroad Co.—

Capacity per 10 hours 3,000 tons.
Depth of water at dock 20 feet.
Maximum length of boat 700 feet.
Supt. A. E. Ehlers.

Houghton County Traction Co.—

Capacity per 10 hours 500 tons.
Depth of water at dock 20 feet.
Can handle boats of 400 foot length.

Van Orden Co., M.—

Capacity per 10 hours 1,500 tons.
Depth of water at dock 21 feet.
Can unload any size boat.
Supt. Louis Reidy.

HUBBELL, MICH.

Calumet & Hecla Smelting Works—

Capacity per day 3,500 tons.
Depth of water 22 feet.
Can unload any size boat.

Ethier, Joseph—

Capacity per 10 hours hard coal 600 tons.

Capacity per 10 hours soft coal 400 tons.

Depth of water 18 feet.
Maximum length of boat 275 feet.
Supt. J. J. Ethier.

Quincy Mill—

Capacity per day 2,500 tons.
Supt. Ralph Hayden.

HURON, OHIO

W. & L. E.—

Car Dump No. 1 (East Side).

W. & L. E.—

Car Dump No. 2 (West Side).
Supt. T. R. Gillmore.

INDIANA HARBOR, IND.

Inland Steel Co.—

Capacity per 10 hours 4,000 tons.

Depth of water at dock 20 feet.
Maximum length of boat 600 feet.
Supt. John W. Lees.

JACKFISH, ONT.

Canadian Pacific Ry. Co.—
Capacity per 10 hours 2,500 tons.

KELLEY ISLAND, OHIO

Kelley Island Lime & Transport Co.—
Depth of water inner end 16 feet.
Depth of water at outer end 21 feet.

Kelley Island Lime & Transport Co.—
North Side Dock.
Can load 1,200 tons per day.
Depth of water at dock 13 feet 6 inches.

Kelley Island Lime & Transport Co.—
South Side Dock.
Can load 1,200 tons per day.
Depth of water at dock 12 feet 6 inches.

KENOSHA, WIS.

Allen's Sons Co., N. R.—
Storage capacity 7,500 tons.
Baldwin Coal Co., Geo. S.—
Capacity per day hard coal 800 tons.
Capacity per day soft coal 700 tons.
Maximum length of boat 300 feet.
Depth of water 17 feet.
O'Donnell Coal Co., John—
Capacity per 10 hours hard coal 650 tons.
Capacity per 10 hours soft coal 500 tons.
Depth of water at dock 17 to 18 feet.
Maximum length of boat 500 feet.

KEWAUNEE, WIS.

Kewaunee Grain Co.—
Capacity per day 300 tons.
Storage capacity 3,000 tons.
Depth of water at dock 16 feet.
Can handle boats of any length.
Supt. G. A. Duvall.

KEY HARBOUR, ONT.

Canadian Northern Ontario Railway Dock—
Capacity per 10 hours 1,200 tons.
Depth of water at dock 21 feet.
Can handle boats of any length.
D. Crombie, Supt. Trans., Toronto.
O. Ruby, Lake Forwarding Agent,
Rockefeller Bldg., Cleveland, O.

KINGSTON, ONT.

James Swift & Co.—
Capacity per 10 hours 400 tons.
Depth of water at dock 12 feet.
Length of boat can reach dock 400 feet.
Supt. James Swift.
Canadian Locomotive Co., Ltd.—
Capacity per 10 hours 500 tons.
Depth of water at dock 12 feet.
Maximum length of boat 550 feet.
Soward's Coal Co. & Crawfords Dock—
Capacity per 10 hours 400 tons.
Depth of water at dock 14 feet.
Supt. J. F. Soward.
Water Works Dept.—
Depth of water at dock 14 feet.
Mgr. C. C. Folger.

KINCARDINE, ONT.

Kincardine Electric Light & Gas Dept.—
Capacity per day 375 tons.
Depth of water at dock 15 to 17 feet.
Supt. J. R. McLinden.
Ontario People's Salt & Soda Co., Ltd.—
Depth of water at dock 14 feet.
Maximum length boat 200 feet.
John Talmie, Secy.

KNIFE RIVER, MINN.

Duluth & Northern Minnesota Ry. Co.—
Capacity per 10 hours 500 tons.
Depth of water at dock 15 feet.
Supt. Frank Kam.

LAKE LINDEN, MICH.

Calumet & Hecla Mining Co.—
Capacity 10 hrs. 3,000 tons, 5,000 tons.

Lake Linden Fuel & Supply Co.—
Capacity per day 400 tons.

LIME ISLAND, MICH.

Pittsburgh Coal Co. (Fuelling Station)—

Unloading capacity per 10 hours
1,800 tons.

Two coaling pockets, capacity 375
tons each, with 4 spouts each.
Height of spouts from water 47
feet.

Length of dock 500 feet.

Depth of water at dock 24 feet.

LITTLE CURRENT, ONT.

Algoma Eastern Railway Co.—

Sudbury, Ont.

Capacity per 10 hours 2,000 tons.

Supt. J. E. Parkes.

LORAIN, OHIO

Baltimore & Ohio Ry. Co.—

2 McMyler Car Dumps.

No. 1 machine below the bridge.

No. 2 machine above N. Y. C. and

St. Louis Ry. Bridge.

Supt. C. E. Pierce.

LUDINGTON, MICH.

Morton Salt Co.—

Capacity per day 1200 tons.

Depth of water 17 feet 6 inches.

Maximum length of boat can han-
dle 315 feet.

Supt. E. C. Hardy.

Cartier Sons Co., A. E.—

Depth of water at dock 17 feet.

Maximum length of boat 350 feet.

Supt. M. J. McBane.

Stearns Salt & Lumber Co. (Salt Dock)—

Loading capacity 1,000 bbls. per
hours or 75 tons per hour.

Depth of water at dock 17 feet.

MACKINAC ISLAND, MICH.

Arnold, George T.—

Capacity per day 500 tons.

Depth of water 14 feet.

Supt. George Lapene.

MANISTEE, MICH.

Duncan, J. W.—

Capacity per day 300 tons.

Depth of water at dock 15 feet.

Maximum length of boat 250 feet.

American Hide & Leather Co.—

Coal handled by J. W. Duncan.

**Buckley & Douglass Lumber Co.
(Salt Dock)—**

Capacity per 10 hours 800 tons.

Depth of water 15 to 16 feet.

Maximum length of boat 350 feet.

Supt. John Lobalski.

MANISTIQUE, MICH.

Chicago Lumbering Co.—

Capacity per day 200 tons.

Depth of water at dock 16 feet.

Can handle boats of any length.

Supt. F. Garrett.

MANITOWOC, WIS.

Goodrich Transportation Co.—

Capacity per day 700 tons.

Johnson Spindler Co.—

Capacity per 10 hours 850 tons.

Depth of water at dock 18 feet.

Maximum length of boat 300 feet.

Supt. W. A. Huchthausen.

Manitowoc Land & Fuel Co.—

Capacity per day hard coal 1,500
tons.

Capacity per day soft coal 900
tons.

Depth of water at dock 18 feet.

Maximum length of boat 350 feet.

**Reiss Coal Co., C. (C. & N. W.
Dock)—**

Depth of water at dock 19 feet.

Reiss Coal Co., C. (Soo Dock)—

Capacity per 10 hours 2,500 tons.

Can handle 550 foot boat.

Supt. J. E. Cory.

MARINETTE, WIS.

Marinette Fuel & Dock Co.—

Capacity per day 500 tons.

Depth of water 15 feet.

Can handle 500 foot boat.

Supt. C. P. Nevins.

MARQUETTE, MICH.

Pickands & Co., Ltd., James—

Capacity per day 3,000 tons.

Depth of water at dock 20 feet.

Maximum length of boat 600 feet.

Supt. Nels Hagen.

Spear & Sons, F. B.—

Capacity per day hard coal 1,800 tons.

Capacity per day soft coal 1,500 tons.

Depth of water at dock 17 feet.

Can handle boats of any length.

MEAFORD, ONT.**Georgian Bay Milling & Power Co.—**

Capacity per day 350 tons.

Depth of water at dock 19 feet.

Can unload boats of any length.

Supt. W. T. Moore.

MENOMINEE, MICH.**Central West Coal Co.—**

Capacity per 10 hours 3,000 tons.

Depth of water at dock 18 feet.

Can handle any length boat.

Supt. E. P. Smith.

Lyon Brothers—

Capacity per day 600 tons.

Depth of water at dock 15 feet.

Maximum length of boat 300 feet.

Supt. C. O. Lyon.

Menominee River Sugar Co.—

Capacity per 10 hours 400 tons.

Depth of water at dock 17 feet.

Maximum length of boat 400 feet.

George McCormick, Mgr.

Nowack, T. C.—

Capacity per day 400 tons.

Depth of water at dock 15 feet.

Maximum length of boat 145 feet.

MICHIPICOTEN HARBOUR, ONT.**Commercial Dock—**

Capacity per 10 hours 800 tons.

Depth of water at dock 20 feet.

Maximum length of boat 400 feet.

Supt. S. Worth.

MIDLAND, ONT.**Midland Coal Dock Co., Ltd. (Canada Steamship Lines)—**

Capacity per 22 hours 2,200 tons.

Depth of water at dock 22 feet.

Maximum length of boat 500 feet.

O. Ruby, Lake Forwarding Agent,

Rockefeller Bldg., Cleveland, O.

Supt. D. S. Pratt.

Fellenz Coal & Dock Co. (Old North Side)—

Milwaukee River—Itasca St. Bridge.

1256 Bremen St.

Size of clam shells used $\frac{3}{4}$ ton.

Capacity per 10 hours 1,000 tons.

Storage capacity 52,000 tons.

Maximum length of boat 500 feet.

Depth of water at dock 20 feet.

Supt. L. Rauscher.

Great Lakes Trans. Co. (Ltd.)—

Capacity per 10 hours 2,000 tons.

Depth of water 22 feet.

Can handle any size boat.

Supt. D. H. Clark.

MILWAUKEE, WIS.**Callaway Fuel Co.—**

Cherry St. Bridge.

Capacity per 10 hours 1,200 tons.

Depth of water at dock 19 feet.

Supt. Charles Peterman.

Central Coal Co.—

North Menominee River.

25th Street Dock.

Capacity per 10 hours 6,000 tons.

Depth of water at dock 21 feet.

Maximum length of boat 650 feet.

Supt. E. J. Barthel.

Gallun & Sons, A. F. (Tannery)—

Milwaukee River.

Capacity per 10 hours 750 tons.

Maximum length of boat 300 feet.

Great Lakes Coal & Dock Co. (St. Paul)—

North Menominee Canal.

Capacity per 10 hours 6,000 tons.

Depth of water at dock 20 feet.

Maximum length of boat 470 feet.

Kanawha Fuel Co.—

Pabst Slip.

Capacity per 10 hours 2,500 tons.

Depth of water at dock 19 feet.

Maximum length of boat 380 feet.

Kanawha Fuel Co.—

North Menominee River.

Muskego Avenue.

Capacity per 10 hours 1,500 tons.

Depth of water at dock 20 feet.

Maximum length of boat 650 feet.

Kanawha Fuel Co.—

Whitnall Dock.

- North Menominee River.
4 Portable Electric Hoists.
1½ ton clam shells used.
Capacity per hour 300 tons.
- Lehigh Valley Coal Sales Co.—**
South Menominee River.
Canal Street Dock.
Capacity per 10 hours 3,000 tons.
Depth of water at dock 19 feet 6 inches.
Maximum length of boat 434 feet.
Supt. C. O. Hansen.
- Milwaukee Coke & Gas Co.—**
Kinnickinnic River.
Greenfield Avenue.
Capacity per 10 hours 6,000 tons.
Depth of water at dock 20 feet.
Maximum length of boat 625 feet.
Supt. J. F. Blackie.
- Milwaukee-Western Fuel Co.—**
Milwaukee River.
Cherry Street Dock.
Capacity per 10 hours hard coal 4,500 tons.
Capacity per 10 hours soft coal 2,500 tons.
Depth of water at dock 19 feet.
Maximum length of boat 450 feet.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
Milwaukee River.
Commerce Street Dock.
Capacity per 10 hours 2,000 tons.
Depth of water at dock 19 feet.
Maximum length of boat 450 feet.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
Kinnickinnic River.
Washington Street Dock.
Capacity per 10 hours 5,000 tons.
Depth of water at dock 19 feet.
Maximum length of boat 600 feet.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
Kinnickinnic River.
Kinnickinnic Avenue Dock.
Capacity per 10 hours hard coal 4,500 tons.
Capacity per 10 hours soft coal 1,500 tons.
Depth of water at dock 19 feet.
Can handle any length boat.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
Kinnickinnic River.
Greenfield Avenue Dock.
Capacity per 10 hours 3,000 tons.
Depth of water at dock 19 feet.
Can handle any length boat.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
Anthracite Dock.
North Menominee River.
Sixteenth Street Dock.
Capacity per 10 hours hard coal 5,000 tons.
Depth of water at dock 19 feet.
Can handle any length boat.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
North Menominee River.
Sixteenth Street Dock.
Capacity per 10 hours 8,000 tons.
Depth of water at dock 19 feet.
Can handle any length boat.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
North Menominee River.
Canal Street Dock.
Capacity per 10 hours hard coal 4,000 tons.
Capacity per 10 hours soft coal 3,000 tons.
Depth of water at dock 19 feet.
Can handle any length boat.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
South Menominee River.
Pabst Slip.
Capacity per 10 hours soft coal 1,500 tons.
Depth of water at dock 17 feet.
Maximum length of boat 380 feet.
Supt. W. F. Ardern.
- Milwaukee-Western Fuel Co.—**
14 Grand Ave.
North Menominee River.
Canal Street Dock (Muskego Ave. Bridge).
Capacity per 10 hours hard coal 4,000 tons.
Capacity per 10 hours soft coal 3,000 tons.
Depth of water at dock 20 feet.
Storage capacity 150,000 tons.

Can handle any length boat.
Supt. W. F. Ardern.

Philadelphia & Reading Coal & Iron Co.—

North Menominee River.
West 16th Street Viaduct.
Capacity per 10 hours 1,500 tons.
Capacity per 10 hours 700 tons.
Capacity per 10 hours slack coal 1,000 tons.
Depth of water at dock 18 feet.
Maximum length of boat 460 feet.
Supt. John T. Berns.

Schlitz Brewing Co., Joseph—
Milwaukee River.

Capacity per 10 hours 2,500 tons.
Depth of water at dock 20 feet.
Maximum length of boat 505 feet.
Supt. U. B. Uhllein.

United Coal & Dock Co. (Gross)—

Menominee River—Sixth st. Bridge.
Size of clam shells used 1½ ton.
Capacity per 10 hours 3,000 tons Bituminous.
Capacity per 10 hours 5,000 tons Anthracite.
Depth of water at dock 20 feet.
Supt. J. J. Bosch.

United Coal & Dock Co.—

Independent Dock, Mouth of Harbor.
Kinnickinnic River—National Ave.
Capacity per 10 hours 5,500 tons.
Can handle any length boat.

United Coal & Dock Co. (Y. & O.)—
25th Street Dock.

Capacity per 10 hours 5,000 tons.
Depth of water at dock 20 feet.
Maximum length of boat 600 feet.
Supt. Joe Ulwelling.

Youghogheny & Ohio Coal Co.—
South Menominee River (Wagner Slip).

Capacity per 10 hours 4,000 tons.
Depth of water at dock 20 feet.
Maximum length of boat 430 feet.
Supt. B. J. Boyle.

MOHAWK, MICH.

Mohawk Mining Co.—

Capacity per 10 hours 800 tons.
Depth of water at dock 18 feet.
Maximum length of boat 350 feet.
Supt. Andro Plottte.

Wolverine Copper Co.—

Coal unloaded over the dock of the Mohawk Mining Co.

MONTREAL, CAN.

Century Coal Co., Ltd.—

Capacity per 10 hours 2,400 tons.
Supt. Robert Wallace.

Century Coal Co., Ltd.—

Capacity per 10 hours 600 tons.
Depth of water at dock 14 feet.
Supt. Robert Wallace.

Canada Cement Co., Ltd., Plant No. 1—

Pointe-aux-Trembles.
Capacity per 10 hours 2,400 tons.
Depth of water at dock 25 feet.
Maximum length of boat 600 feet.
Supt. F. B. Kilbourn.

Canada Cement Co., Ltd.—

Montreal Harbor.
Capacity per 10 hours 700 tons.
Depth of water at dock 25 to 30 feet.
Maximum length of boat 600 feet.
Supt. F. B. Kilbourn.

Canadian Import Co.—

Near entrance of Lachine Canal.
Capacity per 10 hours 2,000 tons.
Depth of water at dock 25 feet.
Supt. W. Q. Stobo.

Canada Sugar Refining Co.—

Wellington Basin, Lachine Canal.
Capacity each set, per 10 hours, 600 tons.

Depth of water boats can draw arriving at dock 14 feet 6 in.
Maximum length of boat that can reach dock 250 feet.
Supt. Mr. Bowers.

Canadian Rolling Mills Co. (Ltd.)—

Located in Lachine Canal.
Capacity per 10 hours 750 tons.
Depth of water at dock 14 feet.
Maximum length of boat 256 feet.
Supt. John Herbaud.

Dominion Coal Co., Ltd.—

Hochelago, Windmill Point.
Capacity each set per hour 1,700 tons.
Depth of water at dock 26 feet.
Supt. A. MacKenzie.

Hall Coal Co., Ltd., George—

Lachine Canal.

Capacity per 10 hours 2,000 tons.

Depth of water at dock 14 feet.

Maximum length of boat 275 feet.

Supt. C. W. Kelly.

Montreal Light, Heat & Power Co.—

Lasalle Gas Works (Lachine Canal).

Capacity per 10 hours 2,500 tons.

Depth of water at dock 14 feet 6 inches.

Maximum length of boat 256 feet.

Supt. Sam Skinner.

Montreal Light, Heat & Power Co.—

Hochelaga Montreal Harbor.

Capacity per 10 hours 2,500 tons.

Depth of water at dock 33 feet.

Maximum length of boat 550 feet.

Supt. Sam Skinner.

Nova Scotia Steel & Coal Co., Ltd.—

Bickerdike Pier, Windmill Point.

Capacity per 10 hours 2,000 tons.

Capacity per 10 hours 600 tons.

Depth of water at dock 28 feet.

Maximum length of boat 650 feet.

Ogdensburg Coal & Towing Co.—

No. 1 Basin, Lachine Canal.

Capacity per 10 hours 1,200 tons.

Depth of water at dock 14 feet.

Maximum length of boat 260 feet.

Ogdensburg Coal & Towing Co.—

Str. Henry, Lachine Canal.

Capacity per 10 hours 600 tons.

Depth of water at dock 14 feet.

Maximum length of boat 260 feet.

Robertson, Farguhar—

No. 3 Basin, Lachine Canal.

Capacity per 10 hours 1,000 tons.

Depth of water at dock 14 feet.

Can handle any length boat.

Supt. Duncan Robertson.

Routh & Son, F. A.—

Capacity per 10 hours 500 tons.

The Steel Company of Canada—

Located on the Lachine Canal.

Capacity per 10 hours 600 tons.

Depth of water at dock 14 feet 6 inches.

Maximum length of boat 250 feet.

Supt. H. M. Jaquays.

The Steel Company of Canada—

Located on the Lachine Canal.

Capacity per 10 hours 600 tons.

Depth of water at dock 14 feet 6 inches.

Maximum length of boat 250 feet.

Supt. H. M. Jaquays.

MUSKÉGON, MICH.**Bauknecht Brothers—**

Capacity per 10 hours 250 tons.

Depth of water at dock 14 feet.

Can handle boats of any size.

Supt. H. A. Banknecht.

OGDENSBURG, N. Y.**Hall Coal & Transportation Co.,
George—**

East End of City.

OSWEGO, N. Y.**Delaware-Lackawanna & Western Coal
Trestle—****OWEN SOUND, ONT.****Electric Light Dock—**

Capacity per 10 hours 300 tons.

Depth of water at dock 20 feet.

Can handle any size boat.

Supt. Joseph McLinden.

Canadian Malleable Iron Co., Ltd.—

Depth of water 14 feet.

Can handle boats of any length.

Canadian Pacific Railway Co.—

One McMyler with Clam.

Capacity per day 400 tons.

Owen Sound Municipal Dock—

Capacity 10 hours 250 tons.

Depth of water 16 feet.

R. R. Connections, G. T., C. P. R.

Supt. J. R. McLinden.

Davis-Smith-Malone Co., Ltd.—

Capacity per hoist 100 tons per day.

Depth of water at dock 18 feet.

Can handle boats of any length.

J. M. Davis, Pres. & Mgr.

**McLauchlan Supply Co., Ltd., J.
K.—**

Capacity per 10 hours 300 tons.

Depth of water at dock 16 feet.

Maximum length of boat 400 feet.

PARRY SOUND, ONT.**Beatty Co., Ltd., William—**

Capacity per 10 hours 225 tons.

Depth of water at dock 18 feet.

PICTON, ONT.**Hepburn Brothers—**

Saginaw Steam Winch.

POINT EDWARD, ONT.**Century Coal Co., Ltd.—**

Capacity per 10 hours 450 tons.

Depth of water at dock 20 feet.

R. R. connection, G. T.

Supt. H. H. Gildersleeve.

PORT ARTHUR, ONT.**Canadian Northern Coal & Ore Dock Co., Ltd.—**

Capacity per 10 hours 7,000 tons.

Depth of water at dock 19 feet.

Can unload boats of any size.

Supt. M. O'Leary.

O. Ruby, Lake Forwarding Agent,
Rockefeller Bldg., Cleveland, O.**Steel Rail Unloading Docks—**

Canadian Northern Railway.

PORT COLBORNE, ONT.**Century Coal Co., Ltd.—**

Capacity per 10 hours 600 tons.

Capacity 10 hours 300 tons.

Work night and day during season.
of navigation.

Depth of water at dock 19 feet.

PORT DALHOUSIE, ONT.**Hutchinson Estate (Fueling Dock)—**

Capacity per 10 hours 300 tons.

Depth of water at dock 17 feet.

Supt. Edw. Quackenbush.

PORT HURON, MICH.**Kern Brewing Co.—**

Capacity per 10 hours 350 tons.

Depth of water at dock 13 feet 6
inches.**McCollom & Co., I. E.—**

Capacity per 9 hours 300 tons.

Depth of water at dock 14 to 15
feet.

Maximum length of boat 250 feet.

Miller Coal & Dock Co.—

Capacity per 10 hours 400 tons.

Depth of water at dock 20 feet.
Can handle any size boats.

Fueling dock

Supt. J. E. Fellows.

Port Huron Sulphite & Paper Co.—

Capacity per 9 hours 650 tons.

Depth of water at dock 17 feet.

Supt. E. W. Kiefer.

**Port Huron Gas & Electric Light
Co. (Electric Plant)—**

Capacity per 10 hours 300 tons.

Depth of water at dock 14 feet.

Can handle boats of 300 feet
length.

Supt. Frank J. E. O'Hara.

**Port Huron Gas & Electric Co. (Gas
Plant)—**

Capacity per 10 hours 300 tons.

Depth of water at dock 13 feet.

Maximum length of boat 300 feet.

Supt. J. C. Sloan.

Port Huron Salt Co.—

Capacity 500 tons.

Depth of water at dock 17 feet.

Can handle boats of any length.

Supt. Otto Huette.

Port Huron & Sarnia Ferry Co.—

Capacity per 10 hours 150 tons.

Depth of water at dock 14 feet.

Maximum length of boat 300 feet.

Thompson Coal Co.—

Capacity per 10 hours 500 tons.

PORT WASHINGTON, WIS.**Milwaukee Northern Electric Ry.
Co.—**

Capacity per 10 hours 400 tons.

Depth of water at dock 16 feet.

Maximum length of boat 360 feet.

Supt. F. W. Walker.

Port Washington Fuel Co.—

Capacity per 10 hours 400 tons.

Depth of water at dock 16 feet.

Maximum length of boat 215 feet.

Supt. W. C. Mitchell.

PRESCOTT, ONT.**Hall Coal & Transportation Co., Geo.—**

East End of City.

Capacity per 10 hours 3,000 tons.

Depth of water at the dock 19 feet.

Supt. Harry M. Atwood.

QUEBEC, QUEBEC**Canadian Import Co.—**

Louise Dock, Louise Basin.

Capacity per 10 hours 1,200 tons each tower.

Depth of water at dock 25 feet

Supt. D. Burridge.

Century Coal Co., Ltd.—

72 Dalhousie St.

Capacity per 10 hours 650 ton.

Depth of water at dock 15 feet.

Supt. D. A. Mundy.

Dominion Coal Co., Ltd.—

Louise Basin.

Capacity 500 tons per hour.

Depth of water at dock 28 feet.

Maximum length of boat 400 feet.

Supt. William Lambton.

Nova Scotia Steel & Coal Co., Ltd.—

Capacity per 10 hours 1,800 tons.

RACINE, WIS.**Carroll Coal Co.—**

Capacity per 10 hours 750 tons.

Depth of water at dock 16 feet 6 inches.

Maximum length of boat 250 feet.

Supt. Geo. T. Caystill.

Pugh, W. H., Dock No. 1—

Capacity per 10 hours 1,000 tons.

Depth of water at dock 18 feet.

Can handle boats of any length.

Pugh, W. H., Dock No. 2—

Capacity per 10 hours 900 tons.

Depth of water at dock 16 feet.

Pugh, W. H.—

$\frac{1}{2}$ ton buckets used.

Capacity per 10 hours hard coal 800 tons.

Capacity per 10 hours soft coal 600 tons.

Maximum length of boat 350 feet.

Depth of water at dock 17 feet 6 inches.

Storage capacity 24,000 tons.

Racine Fuel Co.—

Capacity per 10 hours 700 tons.

Depth of water at dock 16 feet.

Wisconsin Gas & Electric Co.—

1 Roberts & Schaefer Bldg.

Capacity per 10 hours 1,000 tons.

Depth of water at dock 18 feet.

Supt. S. B. Sherman.

RONDEAU, ONT.**Lake Erie Nav. Co., Walkerville, Ont.—**

Capacity 10 hours 2,500 tons.

One whirley.

Storage capacity 100,000 tons.

Depth of water at dock 15 feet.

Can handle boats of any length.

SARNIA, ONT.**Imperial Oil Co., Ltd.—**

Capacity per day 400 tons.

Depth of water at dock 19 feet.

Maximum length of boat 300 feet.

Northern Navigation Co.—

Capacity per 10 hours 500 tons.

Depth of water at dock 15 feet.

Can handle boats of any length.

Supt. W. J. McCormack.

SANDUSKY, OHIO**Lower Lake Dock Co. (Short Line)—**

Car Dump.

Supt. C. C. Hand.

Baltimore & Ohio—

Coal Trestle.

SAULT STE. MARIE, MICH.**Kemp Bros. Coal Co. (Hard Coal Dock)—**

Capacity per 10 hours 1,000 tons.

Depth of water at dock 15 feet.

Kemp Bros. Coal Co.—

Capacity per 10 hours 500 tons each.

Depth of water at dock 22 feet.

Maximum length of boat 400 feet.

Can fuel boats of any length.

Perry, Frank—

Capacity per 10 hours 600 tons.

Depth of water at dock 24 feet.

Can handle any size boat.

Supt. Fred Smith.

Union Carbide Co.—

Capacity per 10 hours 1,200 tons.

Depth of water at dock 21 feet.

Maximum length of boat 500 feet.

Supt. John White.

SAULT STE. MARIE, ONT.**Algoma Central Railway Dock—**

Capacity per 10 hours 2,000 tons.

Depth of water at dock 22 feet.

Can handle any length boat.
Supt. R. S. McCormick.

Algoma Steel Corporation, Ltd.—
Capacity per 10 hours 4,000 tons.
Depth of water at dock 20 feet.
Can handle boats of any length.
Supt. J. A. MacColl.

West Government Dock—
Capacity per 10 hours, 1,000 tons.
Depth of water at dock 18 feet.
Storage capacity 15,000 tons.
300 foot boats.
G. G. Farwell, Pres.

Century Coal Co. (Ltd.)—
Capacity 10 hours 1,000 tons.
Depth of water 21 feet.
Supt. W. F. Gelchriese.

Pittsburgh Coal Co. (Algonquin Dock)—
Dock located above the Locks on the port side.
Capacity per 10 hours 1,800 tons.
Capacity 10 hours 1,800 tons.
Depth of water at dock 19 feet.
Maximum length of boat 400 feet.
Tom F. Folkner, Mgr.

Sault Ste. Marie Gas & Electric Co.—
½ mile east of Carbide Dock.
Capacity per 10 hours 500 tons.
Depth of water at dock 15 feet.
Maximum length boat 250 feet.
Supt. James Trimble.

SHEBOYGAN, WIS.

Sheboygan Coal Co.—
Capacity per 10 hours 700 tons.
Depth of water at dock 18 feet 6 inches.
Maximum length of boat 300 feet.
Supt. Fred Artking.

Reiss Coal Co., C. (Dock No. 1)—
Capacity per 10 hours 8,000 tons.
Depth of water at dock 19 feet.
Supt. L. H. Bullock.

Reiss Coal Co., C. (Dock No. 3)—
Capacity per 10 hours 2,500 tons.
Depth of water at dock 19 feet.

SODUS POINT, N. Y.

Southern Central Ry. Coal Trestle—

SOREL, QUEBEC

Lavelle, Alfred—
Capacity per 15 hours 1,500 tons.

SOUTH CHICAGO, ILL.

By-Products Coke Corporation—
112th Street.
Capacity per 10 hours 10,000 tons.
Depth of water at dock 21 feet.
Maximum length of boat 565 feet.
Supt. Wm. H. Allen, Jr.

Hedstrom & Co., E. L., 95th St.—
Capacity per 10 hours 3,000 tons.
Depth of water at dock 20 feet.
Maximum length of boat 525 feet.
Supt. James Kinney.

Lehigh Valley Coal Co., 100th St.—
Capacity per 10 hours small boats 3,000 tons.
Capacity per 10 hours large boats 4,000 tons.
Depth of water at dock 20 feet.
Maximum length of boat 480 feet.
Supt. A. Wallace.

Philadelphia & Reading, 96th St.—
Capacity per 10 hours 2,000 tons.

Illinois Steel Co. (Rail Loading Dock)—
North Slip Dock.
Capacity 2,400 tons in 48 hours.
Depth of water at dock 20 feet.

Pittsburgh Coal Co.—
South of So. Chicago Elevators.
Capacity per 10 hours 800 tons.
Depth of water at dock 22 feet.
Maximum length of boat 300 feet.
Supt. C. H. Wallace.

Illinois Steel Co. (Rail Loading Dock)—
South Slip Dock.
Capacity 2,400 tons in 48 hours.
Depth of water at dock 20 feet.

ST. CLAIR, MICH.

Diamond Crystal Salt Co.—
Capacity per 10 hours 900 tons.
Depth of water at dock 18 feet.
Maximum length of boat 600 feet.
Supt. Fred W. Moore.

Port Huron Salt Co.—
Capacity per 10 hours 200 tons.
Depth of water at dock 14 feet 6 inches.
Maximum length of boat 400 feet.
Supt. L. H. Meno.

STURGEON BAY, WIS.**Green Stone & Quarrying Co.—**

Capacity per 10 hours 300 tons.
Depth of water at dock 16 feet.
Maximum beam of boat 38 feet.
Supt. A. O. Green.

Leathem & Smith Towing & Wrecking Co.—

Storage capacity 2,000 tons.
Depth of water at dock 15 feet.
Maximum length of boat 250 feet.
Supt. F. H. Behringer.

SUPERIOR, WIS.**Berwind Fuel Co. Dock No. 1—**

Capacity per 10 hours 11,000 tons.
Depth of water at dock 20 feet.
Can handle boats of any length.
Supt. W. K. Link.

Carnegie Fuel Co. No. 1 (Old G. N.)—

Capacity per 10 hours 3,000 tons.
Depth of water at dock 21 feet.
Maximum length of boat 700 feet.
Supt. B. McNamara.

Great Lakes Coal & Dock Co. (P. & R.)—

Capacity per 10 hours soft coal 2,500 tons.
Can handle boats of any length.
Supt. M. J. Bartelme.

Hanna Dock Co., The M. A.—

Capacity per 10 hours 6,000 tons.
Depth of water at dock 19 feet.
Can handle boats of any length.
Supt. A. E. Botsford.

Island Creek Coal Dock Co., Dock No. 2—

Capacity per 10 hours 2,000 tons.
Depth of water at dock 19 feet.
Can handle boats of any length.
Supt. A. W. Fay.

Lehigh Valley Coal Sales Co.—

Tower Bay Slip.
Capacity per 10 hours hard coal 5,000 tons.
Depth of water at dock 21 feet.
Can handle boats of any length.
Supt. Emil Emmert.

Morton Salt Co.—

Tower Bay Slip.
Capacity per 10 hours 500 tons.

Depth of water at dock 14 to 15 feet.

Northern Coal & Dock Co.—

Capacity per 10 hours 5,000 tons.
Depth of water at dock 20 feet.
Can handle boats of any length.
Supt. C. E. Kielley.

North Western Fuel Co., Dock No. 1—

East side of dock.
Capacity per 10 hours 5,000 tons.
West side of dock No. 1.
Capacity per 10 hours 5,000 tons.
West side of No. 1.
Capacity per 10 hours 6,000 tons.
Depth of water at dock 21 feet.
Supt. B. A. Galleher.

North Western Fuel Co., Dock No. 2—

Capacity per 10 hours 10,000 tons.
Depth of water at dock 21 feet.
Can handle boats of any length.
Supt. B. A. Galleher.

North Western Fuel Co., Dock No. 3—

Capacity per 10 hours 3,500 tons.
Depth of water at dock 21 feet.
Can handle boats of any length.
Supt. B. A. Galleher.

Philadelphia & Reading Coal & Iron Co.—

Capacity per 10 hours 5,000 tons.
Depth of water at dock 20 feet.
Can handle boats of any length.
Supt. Frank McCreary.

Pittsburgh Coal Co., Dock No. 5—

Capacity per 10 hours 5,000 tons.
Depth of water at dock 21 feet.
Can handle boats of any length.
Supt. W. B. Elliott.

Pittsburgh & Ashland Coal & Dock Co.—

Capacity per 10 hours 2,700 tons.
Storage capacity 150,000 tons.
Depth of water at dock 19 feet.
Maximum length of boat 600 feet.
R. R. connections, G. N., N. P., Omaha, Soo, D. S. S. & A., St.

Reiss Coal Co., C. No. 3 (Pgh. No. 3)—

Capacity per 10 hours 9,000 tons.
Depth of water at dock 21 feet.

Can handle boats of any length.
H. Beck, Mgr.

Superior Manufacturing Co. (Tower Slip)—

Capacity per 10 hours 1,000 tons.
Depth of water at dock 18 feet.
Can handle boats of any length.
Supt. H. E. Speakes.

THREE RIVERS, QUE.

Dominion Coal Co., Ltd.—
Capacity per 10 hours 4,000 tons
Depth of water at dock 40 feet.
Supt. W. C. Haynes.

TOLEDO, OHIO

Asphalt Block Pavement Co. (Sand Dock)—

Capacity per 10 hours 800 tons.
Depth of water at dock 25 feet.
Can handle any size boat.
Supt. George Hayatt.

B. & O. Ry. Co.—

One Car Dump.
Supt. J. W. Kelly.

Hocking Valley—

East Side of River.
2 Brown Hoist Car Dump.
Supt. H. W. Hoey.

Hocking Valley—

East side of river.
2 Brown hoist car dumps.
Supt. V. H. Palmer.

Toledo Fuel Co.—

Magnolia Street Dock.
Depth of water at dock 19 feet.

Toledo Fuel Co.—

Ohio Central Slip.
Depth of water at dock 18 feet.

T. & O. C.—

One Car Dump.
Supt. C. A. Hoyt.

TORONTO, ONT.

Century Coal Co., Ltd.—

Capacity per 10 hours 500 tons.
Depth of water at dock 14 feet.
Supt. F. T. Malone.

Milnes Coal Co., Ltd.—

Capacity per 10 hours 350 tons.
Depth of water at dock 20 feet.
Supt. Arthur Purdue.

Burnes & Co., P.—

Capacity per 10 hours 400 tons.

Toronto Niagara Power Co., Ltd.—

Capacity per 10 hours 400 tons.
Depth of water at dock 14 feet.
Supt. F. Tushingham.

Swift's Coal Dock—

1 McMyler Whirley.
1 ton clam shell used.
Capacity 10 hours 400 tons.
Storage capacity 10,000 tons.
Depth of water 13 feet.
Supt. James Swift, Jr.

Standard Fuel Co., Ltd.—

Church Street Wharf.
Capacity per 10 hours 1,000 tons.

Rogers & Co., Elias—

Capacity per 10 hours 400 tons.
Depth of water at dock 14 feet.

TRAVERSE CITY, MICH.

Hannah-Lay Co.—

Capacity per 10 hours 250 tons.
Depth of water at dock 14 feet.
Maximum length of boat 300 feet.
Supt. H. Morrison.

TWO HARBORS, MINN.

Duluth & Iron Range Ry. Co.—

Capacity per 10 hours 6,000 tons.
Depth of water at dock 18 feet 6 inches.

Maximum length of boat 460 feet.
Supt. Fred W. Thias.

Duluth & Iron Range Ry. Co.—

Can load 250 cords of pulp per day.

Supt. J. H. Spurbeck.

Duluth & Iron Range Ry. Co.—

540 feet long.

TWO RIVERS, WIS.

Reiss Coal Co., C.—

Capacity per 10 hours 1,000 tons.
Depth of water 16½ feet.
Length of boat 400 feet.
Supt. John Schultz.

WASHBURN, WIS.

Northwestern Fuel Co.—

Capacity per 10 hours 4,000 tons.
Depth of water at dock 21 feet.

Maximum length of boat 525 feet.
Supt. J. W. Gibson.

WAUKEGAN, ILL.

Waukegan Fuel Co.—

Capacity per 10 hours 900 tons.
Depth of water at dock 18 feet.
Maximum length of boat 330 feet.

Reiss Coal Co., C.—

Capacity per 10 hours 1,250 tons.
Depth of water at dock 18 feet 6 inches.

Maximum length of boat 500 feet.
Supt. Thomas Farmer.

Reiss Coal Co., C.—

Capacity per 10 hours 1,800 tons.

Depth of water at dock 18 feet 6 inches.

Maximum length of boat 500 feet.
Supt. Thomas Farmer.

WEST FORT WILLIAM, ONT.

Canadian Northern Railway Co.—

Capacity per 10 hours 1,000 tons.
Depth of water at dock 19 feet 6 inches.

Maximum length of boat 600 feet.
Supt. M. O'Leary.

WIARTON, ONT.

Crown Cement Co., Ltd.—

Capacity per 10 hours 400 tons.
Depth of water at dock 14 feet

Steamship Corporations

Algoma Central Steamship Co., Ltd.	Fleet No.	2
American-Interlake Co.	"	5
American Steamship Co.	"	24
American Steamship Co.	"	204
American Transit Co.	"	4
Argo Steamship Co.	"	8
Arnold Transportation Co.	"	9
Atlas Steamship Co.	"	12
Atlas Transportation Corp.	"	13
Beaver Steamship Co., Ltd.	"	18
Beaver Steamship Co.	"	246
Benton Transit Co.	"	20
Bristol Transit Co.	"	280
Bradley Transportation Co.	"	29
British Columbia Transp., Ltd.	"	31
Brown Steamship Co.	"	32
Brown Transit Co.	"	33
Buffalo Steamship Co.	"	222
Buffalo Tr. Fort Erie S. S. Co., Ltd.	"	38
Calcite Transportation Co.	"	42
Calumet Transportation Co.	"	145
Cameron Steamship Co.	"	44
Cambria Steamship Co.	"	145
Canada Atlantic Transit Co., Ltd.	"	45
Canada Steamship Lines, Ltd.	"	47
Canadian Pacific Car and Passenger Transfer Co.	"	51
Carrollton S. S. Co.	"	55

Castile Transit Co.	Fleet No. 280
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Central Transportation Co.	158
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Chicago Navigation Co.	317
Chicago & South Haven Line	68
Christopher Steamship Co.	317
Cleveland—Erie and S. S. Co.	75
Cleveland Transportation Co.	76
Cleveland & Buffalo Transit Co.	74
Collingwood S. S. Co.	81
Crosby Transportation Co.	86
Davidson, S. S. Co.	86
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Detroit & Cleveland Navigation Co.	98
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Eastern Steamship Co.	145
Empire Steamship Co.	32
Erie & Michigan Ry. & Navigation Co.	113
Escanaba & Garden Bay Transportation Co.	114
Fort Henry Transit Co.	280
Franklin Steamship Co.	246
Franklin Transp. Co.	145
Gartland Steamship Co.	317
General Transit Co.	122
Georgian Bay Navigation Co.	76
Globe Steamship Co.	323
Goodrich Transit Co.	129
Goshawk Transportation Co.	22
Graham & Morton Transportation Co.	130

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GENERAL DIMENSIONS OF LAKE VESSELS

Richt No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
146	Aberdeen (Can.)	142	87	Wood.	8300	99' 6"	22'	8' 7"	28	3	1894
323	Adams, Cuyler	5785	4497	Steel.	7300	474'	52'	29'	23	4	1904
267	Adriatic	4945	3605	Steel.	1200	420'	52'	28'	32	4	1907
224	Advance (Can.)	1031	769	Wood.	10200	175'	35' 3"	15'	4	1	1884
145	Agassiz, R. L.	6530	4910	Steel.	10200	532'	56'	31'	32	3	1907
2	Agawa (Can.)	3759	2468	Steel.	5400	376'	46'	26'	10	3	1902
222	Agnew, William C.	6533	4985	Steel.	10300	532'	58'	31'	30	3	1911
228	Alaska (Can.)	986	592	Iron...	1500	212'	32'	13' 5"	5		1871
136	Allegheny	3898	2967	Steel.	5000	350'	46'	30'	18	3	1910
354	Alpena	2886	1787	Steel.	3400	356'	47'	26'	18	3	1909
330	Amaranth	774	....	Steel.	....	150'	28'	14'	11		1892
162	Amazon	3702	2680	Steel.	5700	376'	46'	26'	32	3	1917
145	Amberg, Wm. A.	7031	....	Steel.	10500	525'	58'	31'	5	2	1903
47	Ames, A. E. (Can.)	1637	....	Steel.	1800	246'	37'	24'	7	1	1892
72	Andaste	1573	1256	Steel.	3000	266'	38'	22'	33	3	1907
314	Andrews, Matthew	7014	5497	Steel.	10200	532'	56'	31'	13	4	1899
72	Angeline	4690	....	Steel.	6300	414'	50'	28'	3	1	1871
200	Annie Laura	244	189	Wood	425	133'	24' 6"	10' 7"	1		1892
224	Arabian (Can.)	1073	770	W.&S.	1200	178' 6"	31'	13' 6"	16	4	1906
267	Arcturus	7159	5744	Steel.	9600	514'	54'	31'	5	1	1895
8	Argo	721	490	Wood	1200	192'	35'	12' 8"	22	4	1898
267	Argus	4444	....	Steel.	6800	408'	50'	28'	5	1	1868
245	Arizona	765	601	Wood	1100	189' 4"	32' 6"	13' 4"	30	4	1909
182	Ashley, J. S.	6361	4789	Steel.	9500	504'	54'	30'	12'		1906
330	Aspen	277	....	Steel.	....	118'	25'	12'	8	2	1895
224	Atikoken (Can.)	2004	....	Steel.	3100	308'	38'	24'			

Steamers									
302	Atlantis	197	106	Wood.	300	109' 2"	23' 2"	8'	1887
162	Augustus, A. A. . . .	6390	4869	Steel.	9500	504'	54'	30'	30 4 1910
162	Australia	3845	2377	Steel.	5700	376'	48'	26'	11 3 1917
34	Aztec	834	653	Wood	1100	180'	33' 3"	13' 10"	1889
Barges									
353	Acacia	188		Wood.	300	162'	20'	9'	1873
105	Acadia (Can.)	375		Wood.	700	150'	26' 5"	11' 5"	1875
141	A—D (Can.)	462		Wood.	700	147'	30' 1"	13' 4"	1899
253	Albin (Can.)	149		Wood.	300	110'	22' 8"	7' 3"	1888
100	Alice (Can.)	248		Wood.	500	120' 7"	25' 8"	12' 9"	1892
103	Aloha (Can.)	517		Wood.	1000	171' 2"	32'	12'	5 1888
61	Amarine (Can.)	131		Wood.	250	106' 6"	23' 2"	7' 2"	1908
248	Andrews, Abbie L. (Can.)	278	264	Wood	500	136'	26'	12'	1873
22	Arthur	937	891	Wood.	1800	217'	35' 3"	14' 8"	8 1 1871
257	Arthur (Can.)	350	326	Wood.	600	148'	26'	11' 3"	1893
13	Ashland	991	956	Wood.	1800	218' 4"	37' 8"	15'	1886
13	Atlasco (Can.)	788		Wood.	1500	218'	32' 6"	14' 6"	8 1881
13	Auger Antoine (Can.)	365		Wood.	700	151'	26'	11' 2"	1875
13	Augustus (Can.)	802		Wood.	1500	177' 5"	39' 6"	15'	1893
227	Aurora	2236	2181	Wood.	3200	290'	41'	21' 6"	1 1887
Steamers									
268	Baker, Geo. F.	7210	5459	Steel.	11500	580'	58'	32'	36 3 1907
323	Ball Brothers	5733	4438	Steel.	8700	480'	52'	30'	28 3 1905
323	Ball, Frank C.	6909	5459	Steel.	10000	530'	56'	31'	31 3 1906
17	Barlum, John J.	6419	4924	Steel.	9500	504'	54'	30'	30 4 1909
17	Barlum, Thomas	5752	4485	Steel.	8500	480'	52'	30'	28 3 1908
323	Barnum, G. G.	6272	4826	Steel.	9500	504'	54'	30'	30 3 1905
83	Barth, L. L.	683	491	Wood.	900	185'	35'	13' 8"	1889

GENERAL DIMENSIONS OF LAKE VESSELS

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
146	Aberdeen (Can.)	142	87	Wood.		99' 6"	22'	8' 7"	28	3	1894
323	Adams, Cuyler	5785	4497	Steel.		474'	52'	29'	28	3	1904
267	Adriatic	4945	3605	Steel.		420'	52'	28'	23	4	1907
224	Advance (Can.)	1031	769	Wood.		175'	35'	3'	15	4	1884
145	Agassiz, R. L.	6530	4910	Steel.		532'	56'	31'	32	3	1907
2	Agawa (Can.)	3759	2468	Steel.		376'	46'	26'	10	3	1902
222	Agnew, William C.	6533	4985	Steel.		532'	58'	31'	30	3	1911
228	Alaska (Can.)	986	592	Iron...		212'	32'	13' 5"	5		1871
136	Allegheny	3898	2967	Steel.		350'	46'	30'	18	3	1910
354	Alpena	2886	1787	Steel.		356'	47'	26'	18	3	1909
330	Amaranth	774	...	Steel.		150'	28'	14'	11	3	1897
162	Amazon	3702	2680	Steel.		376'	46'	26'	32	3	1917
145	Amberg, Wm. A.	7031	...	Steel.		525'	58'	31'	5	2	1903
47	Ames, A. E. (Can.)	1637	...	Steel.		246'	37'	24'	7	1	1892
72	Andaste	1573	1256	Steel.		266'	38'	22'	33	3	1907
314	Andrews, Matthew	7014	5497	Steel.		532'	56'	31'	13	4	1899
72	Angeline	4690	...	Steel.		414'	50'	28'	3	1	1871
200	Annie Laura	244	189	Wood		133'	24'	10' 7"	3	1	1892
224	Arabian (Can.)	1073	770	W.&S.		178' 6"	31'	13' 6"	16	4	1906
267	Arcturus	7159	5744	Steel.		514'	54'	31'	5	1	1895
8	Argo	721	490	Wood		192'	35'	12' 8"	22	4	1898
267	Argus	4444	...	Steel.		408'	50'	28'	5	1	1868
245	Arizona	765	601	Wood		189' 4"	32'	13' 4"	30	4	1906
182	Ashley, J. S.	6361	4789	Steel.		504'	54'	30'	8	2	1895
330	Aspen	277	...	Steel.		118'	25'	12'			
224	Atkoken (Can.)	2004	...	Steel.		308'	38'	24'			

Steamers									
302	Atlantis	197	106	Wood.	300	109' 2"	23' 2"	3'	1887
162	Augustus, A. A.	6390	4869	Steel.	9500	504'	54'	30'	30 4 1910
162	Australia	3845	2877	Steel.	5700	376'	48'	26'	11 3 1897
34	Aztec	834	653	Wood	1100	180'	33' 3"	13' 10"	1889
Barges									
353	Acacia	188		Wood.	300	102'	20'	9'	1873
105	Acadia (Can.)	375		Wood.	700	150'	26' 5"	11' 5"	1875
141	A-D (Can.)	462		Wood.	700	147'	30' 1"	13' 4"	1899
253	Albin (Can.)	149		Wood.	300	110'	22' 8"	7' 3"	1888
100	Alice (Can.)	248		Wood.	500	120' 7"	25' 8"	12' 9"	1882
103	Aloha (Can.)	517		Wood.	1000	171' 2"	32'	12'	1888
61	Amarine (Can.)	131		Wood.	250	106' 6"	23' 2"	7' 2"	1908
248	Andrews, Abbie L. (Can.)	278	264	Wood	500	136'	26'	12'	1873
22	Arthur	937	891	Wood.	1800	217'	35' 3"	14' 8"	8 1 1871
257	Arthur (Can.)	350	326	Wood.	600	148'	26'	11' 3"	1893
13	Ashland	991	956	Wood.	1800	218' 4"	37' 8"	15'	1886
13	Atlasco (Can.)	788		Wood.	1500	218'	32' 6"	14' 6"	8 1881
13	Auger Antoine (Can.)	365		Wood.	700	151'	26'	11' 2"	1875
13	Augustus (Can.)	802		Wood.	1500	177' 5"	39' 6"	15'	1893
227	Aurora	2236	2181	Wood.	3200	290'	41'	21' 6"	1 1887
Steamers									
268	Baker, Geo. F.	7210	5459	Steel.	11500	580'	58'	32'	36 3 1907
323	Ball Brothers	5730	4438	Steel.	8700	480'	52'	30'	28 3 1905
323	Ball, Frank C.	6909	5459	Steel.	10000	530'	56'	31'	31 3 1906
17	Barlum, John J.	6419	4924	Steel.	9500	504'	54'	30'	30 4 1909
17	Barlum, Thomas	5752	4485	Steel.	8500	480'	52'	30'	28 3 1908
323	Barnum, G. G.	6272	4826	Steel.	9500	504'	54'	30'	30 3 1905
83	Barth, L. L.	683	491	Wood.	900	185'	35'	13' 8"	1889

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

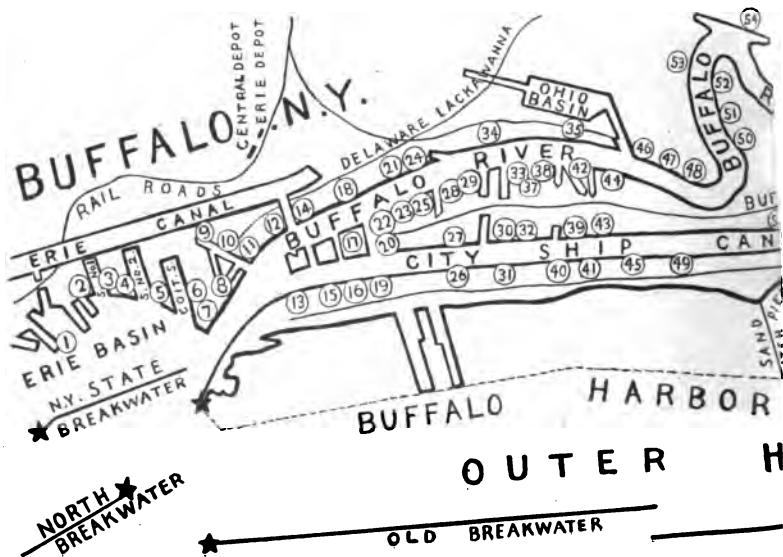
Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
47	Beaverton (Can.) ..	2011	....	Steel.	3000	249'	42'	24'	3		1908
134	Belgium	3860	....	Steel.	5700	370'	48'	28'	11	4	1902
246	Berry, B. F.	6188	6188	Steel.	8500	480'	52'	30'	28	4	1908
268	Bessemer, Sir Henry	4321	3293	Steel.	6700	412'	48'	28'	12	4	1896
47	Bickerdike (Can.) ..	515	864	Comp.	1250	222'	34'	25' 6"	6	3	1873
307	Bielman, C. F.	2056	1709	Wood.	3000	291'	41'	19' 8"	8	1	1892
21	Bielman, C. F., Jr.	33	23	Steel.		67' 6"	14'	7' 3"			1907
162	Billings, Frank	5494	....	Steel.	8500	444'	56'	30'	25	3	1910
317	Bixby, W. K.	5712	4407	Steel.	8500	480'	52'	30'	14	3	1906
268	Black, Clarence A..	4521	3474	Steel.	6900	414'	50'	28'	13	4	1898
145	Black, H. F. ....	....	....	Steel.	9500	504'	54'	30'	16	4	1916
162	Block, Joseph	6486	4939	Steel.	10800	549'	56'	31'	34	4	1907
24	Boland, John J.	4924	4530	Steel.	8700	480'	54'	30'	14	3	1907
24	Booth, Edwin L. ...	4626	3584	Steel.	7000	412' 9"	51' 6"	28'	11	4	1901
136	Boston	4184	3283	Steel.	5000	350'	48'	30'	5	5	1913
167	Boyce, I. J.	368	316	Wood.	550	138'	29' 6"	11'	3	1	1889
252	Boyce, Mary H.	700	476	Wood.	1200	181' 4"	34' 2"	14'	4	1	1888
29	Bradley, C. D. ....	....	....	Steel.	10000	530'	60'	31'	30	3	1917
22	Bradley, Charles H.	804	624	Wood.	1200	201'	37'	13' 6"	4	1	1890
33	Bradley, M. A.	5539	4127	Steel.	3200	460'	52'	30'	13	4	1908
274	Brittan, R. C. (Can.)	200	149	Wood.	300	142'	24'	8'			1877
19	Brower, A. G.	3582	2778	Steel.	5400	346'	48'	28'	10	4	1902
33	Brown, Fayette	6377	....	Steel.	9500	504'	54'	30'	30	4	1910
33	Brown, Harvey H..	6634	....	Steel.	10500	532'	58'	31'	31	3	1908
22	Brown, J. J. H.	5069	3787	Steel.	7400	432'	52'	28'	24	4	1908

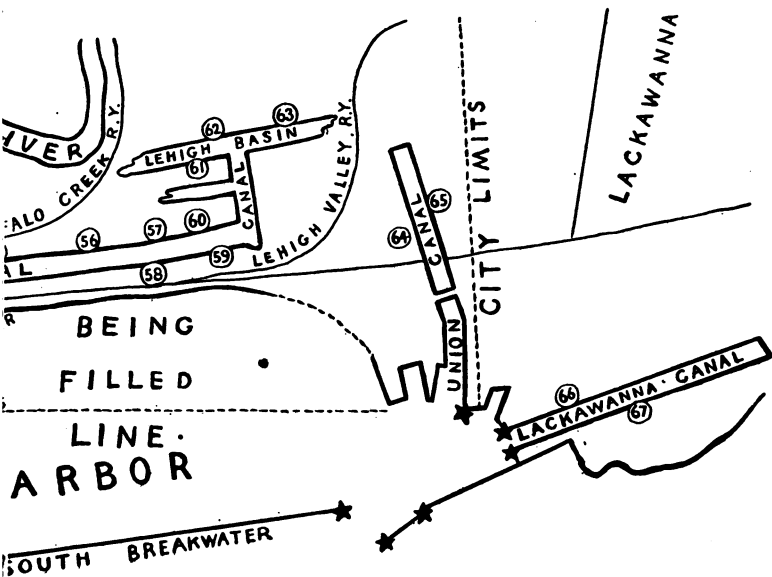
Steamers

145	Brown, Wm. L.	4904	3879	Steel.	7300	430'	50'	28' 6"	24 3	1901
19	Brown, W. W.	3582	2778	Steel.	5400	346'	48'	28'	10 4	1902
231	Buckley, Edward ...	414	313	Wood.	450	154' 3"	31' 7"	10' 6"	5	1891
245	Buel, F. R.	951	743	Wood.	1500	194'	35' 6"	13' 9"	5	1888
136	Buffalo	3951	3272	Steel.	331'	50'	29'	29'	36 3	1899
268	Buffington, Eugene J.	7528	5839	Steel.	11500	580'	58'	32'	14 4	1909
268	Bunson, R. W. E. ...	5181	4012	Steel.	7400	446'	50'	29' 6"	14 4	1900
1	Burnham, Geo.	332	219	Wood.	600	149'	29'	10' 1"	3	1872
162	Butler, Joseph G., Jr.	6588	5174	Steel.	10000	525'	55'	31'	32 3	1905
278	Byers, A. M.	6364	4841	Steel.	9500	504'	54'	30'	30 4	1910

Barges

224	Bacon, M. S.	614	....	Wood.	1200	182'	33' 6"	13' 6"	6 1	1874
272	Barlum, J. J.	1184	1125	Wood.	2100	234'	40' 8"	16'	13	1890
147	Beechland (Can.) ..	420	....	Wood.	800	170' 5"	35'	12' 9"	11 3	1917
268	Bell, Sir Isaac L. ...	3418	3158	Steel.	5700	366'	44'	26'	11 3	1896
253	Blackburn, R. S. (Can.)	208	....	Wood.	400	122' 1"	24' 1"	8' 6"	6	1907
148	Bloom, Nelson	549	521	Wood.	950	197' 7"	31' 2"	11' 3"	6 1	1863
253	Booth, John R. (Can.)	179	....	Wood.	....	113"	24' 2"	7' 8"	5 1	1911
286	Bottsford, Rhoda ...	499	474	Wood.	850	167' 1"	32' 9"	10' 3"	5 1	1881
188	Brainard, K. (Can.) .	398	....	Wood.	800	169' 8"	30'	10'	1871	1912
253	Bremmer, E.R. (Can.)	179	....	Wood.	325	113'	24' 2"	7' 8"	5 1	1897
224	Brighton (Can.)	634	607	Wood.	1000	179' 6"	34' 7"	11' 4"	5 1	1868
22	Brightie	600	570	Wood.	1000	182'	33' 2"	13'	1888	1873
47	Brookdale (Can.) ..	1067	....	Wood.	2100	213'	39' 8"	16' 8"	1888	1873
63	Brown, Belle	217	207	Wood.	375	124' 6"	27' 4"	9' 3"	1899	1899
253	Brunette (Can.)	163	....	Wood.	....	108'	24'	8'	1899	1899





GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Barges											
268	Bryn Mawr	4294	3853	Steel.	7500	400'	50'	27'	13	3	1900
87	Buckeye State	518	492	Wood.	900	171'	32' 7"	11' 5"			1873
253	Burstell, J. (Can.) ..	191			350	119' 7"	24' 1"	8'			1908
216	Butman, Myron	424	403	Wood.	800	164' 3"	31' 2"	10' 2"			1885
13	Burma (Can.)	884	885	Wood.	1200	183' 6"	39' 5"	15'	6	1	1901
Steamers											
47	Cadillac (Can.)	1263	1068	Steel.	2300	230'	37'	19'	8	1	1892
72	Cadillac	4308	....	Steel.	6300	380'	50'	28'	11	4	1902
328	Cadwell, C. W.	592	212	Steel.	Sand	152'	36'	10' 6"			1911
42	Calcite	3996	2459	Steel.	5500	416'	54'	29'	20	3	1912
47	Calgarian (Can.) ...	2326	1301	Steel.	3000	244' 6"	42' 6"	26' 6"	6	3	1912
267	Calumet	4928	3673	Steel.	7300	420'	52'	28'	23	4	1907
267	Campbell, J. A.	7316	....	Steel.	10200	525'	58'	31'	32	3	1913
328	Canisteo	595	539	Wood.	Sand	182' 2"	34' 3"	12' 2"	4		1886
348	Canobie (Can.) ...	1748	1051	Wood.	2200	252'	38'	21'			1887
267	Canopus	4978	3770	Steel.	8200	464'	50'	28'	14	4	1905
311	Carter, W. J.	235	171	Wood.	450	122'	28'	9' 6"			1886
224	Cataract (Can.) ...	839		Wood.	900	175'	23' 6"	14' 6"			1882
73	Central West	3400	....	Steel.	5200	352'	45'	26'	10	3	1895
267	Cepheus	4551	3451	Steel.	6900	416'	50'	28'	12	4	1903
267	Cetus	4720	3282	Steel.	6900	416'	50'	28'	12	4	1903
320	Chamberlin, C. W. (Can.)	385	243	Wood.	350	127'	26' 6"	9' 7"			1881
136	Chicago	3195	2546	Steel.		325'	44'	28'			1901

268	Carrington	3180	2861	Steel.	5500	352'	44'	26'	11	3	1897
13	Case, J. I.	827	786	Wood.	1400	208'	34' 6"	14' 6"	6		1874
131	Casey, Lyman (Can.)	277		Wood.	550	136'	26'	13'			1867
84	Chamkly	218		Wood.	400	154'	24' 8"	7'			1871
272	Chattanooaga	2339	2266	Wood.	4000	308'	45'	21' 6"	10	3	1898
71	Chieftain	2704	2692	Wood.	4900	342'	46'	21' 6"	11	1	1902
204	Coates, L. B.	189	179	Wood.	350	116' 1"	25' 6"	8' 1"			1874
172	Clint, D. K.	729	692	Wood.	1200	168' 6"	32'	18' 8"			1872
14	Cobalt (Can.)	307		Wood.	606	146' 6"	26' 6"	11' 4"			1873
224	Cobourg (Can.)	607		Wood.	1200	179' 6"	34' 7"	11' 4"			1897
267	Constitution	3847	3629	Steel.	6500	438'	44'	26'	14	4	1897
140	Cook, Mary Ellen	152	126	Wood.	300	118'	25' 6"	8'			1875
253	Core, R. M. (Can.)	168		Wood.	300	112' 8"	24'				1904
340	Cram, J. L.	546		Wood.	1000	186' 8"	31' 9"				1881
268	Corliss, Geo. H.	3259	3124	Steel.	5500	352'	44'	26'	11	3	1896
316	Corning, Ida	444	422	Wood.	800	168'	31' 3"	10' 9"			1881
326	Corry, Mike	380	361	Wood.	650	153' 6"	29' 3"	10' 8"			1874
215	Coresands (Can.)	276		Wood.		137'	26'	11' 1"			1873
54	Coteau (Can.)	411		Wood.	600	157' 6"	27'	11'			1897
59	Crete	2083	....	Wood.	3400	288' 6"	44' 6"	19' 1"	8	1	1897
71	Cutler, Dwight G.	468	468	Wood.	1100	165'	36'	12'			1897
178	Cyrenian (Can.)	376	293	Wood.	700	135'	26'	10' 6"			1879
Steamers											
44	Dahlke, H.	442	374	Steel.	Sand	152'	34' 6"	10' 6"			1908
267	Dalton, H. G.	7810	6092	Steel.	12000	580'	60'	32'			1916
323	Davidson, James E.	6206	4943	Steel.	9500	504'	54'	30'	30	3	1905
24	Davidson, Louis R.	6356	4996	Steel.	9700	504'	56'	30'	30	4	1912
86	Davidson, Thomas	2226	1714	Wood.	3000	286'	41' 6"	20' 4"	8		1888
267	Darock, Wm. B.	4468	3246	Steel.	7200	420'	52'	28'	12	4	1907
5	Dawson, Sir Trevor	7215	....	Steel.	11500	580'	58'	32'	36	3	1911
136	Delaware	3901	3250	Steel.		350'	46'	30'			1905

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. Hatches	No. Comp.	Year built
						Keel Length	Beam	Depth			
Steamers											
134	Denmark	5448	4434	Steel.	8400	440'	56'	28'	24	4	1909
141	Derbyshire, Senator (Can.)	1246	987	Wood	2200	220'	40'	18'	6	1	1897
268	Dickson, Wm. D.	7668	5712	Steel.	11500	530'	58'	32'	36	3	1910
317	Dimnick, J. K.	4651	3547	Steel.	6800	423'	51'	28'	13	4	1900
268	Dinkey, Alva C.	7614	5822	Steel.	11500	530'	58'	32'	36	3	1909
19	Donaldson, John A.	4315	3110	Steel.	6300	330'	50'	28'	20	3	1908
296	Donaldson, J. P.	521	425	Wood.	700	185'	30' 4"	12'	4	1	1880
145	Donner, W. H.	6311	4843	Steel.	9500	604'	54'	30'	16	4	1914
47	Doric (Can.)	2359	1452	Steel.	2800	247'	43'	25' 5"	6	2	1903
124	Douglas	230	123	Wood.	225	120' 3"	22' 10"	8' 6"			1882
104	Douville, R. E.	199	135	Steel.		116'	28'	7'			1905
136	Duluth	4623	3785	Steel.		381'	50'	30'			1903
317	Dunham, James S.	4795	....	Steel.	7300	420'	52'	28'	23	4	1906
134	Dunn, John, Jr.	6160	4802	Steel.	10000	504'	58'	30'	15	3	1907
134	Durston, J. F.	4791	3500	Steel.	7800	432'	52'	28'	23	3	1908
Barges											
224	Dakota (Can.)	516		Wood.	1000	170' 4"	30' 6"	11' 9"			1885
305	Davis, Lyman M.	198		Wood.	350	123'	27' 2"	9' 4"			1873
224	Dorrie, Geo. T. (Can.)	680		Wood.	1300	177' 5"	35'	12' 5"			1898
125	Day, Eliza	139	132	Wood.	250	97' 6"	25' 6"	8' 4"			1869
296	Dayton	462	439	Wood.	650	184' 2"	30'	9' 8"	4	1	1871

22	Delaware	524	487	Wood.	1000	173' 6"	30' 4"	13'	5	1	1868
276	Dobbins, D. P. (Can.)	447		Wood.	900	162' 3"	31' 6"	12' 2"			1863
224	Dorchester (Can.) . .	375		Wood.	600	146' 5"	27' 1"	11' 1"			1876
224	Dunmore (Can.) . .	675	590	Wood.	1100	182' 5"	34' 9"	11' 9"			1895
Steamers											
268	Eads, James B.	3746	2970	Steel.	5000	400'	42' 10"	28'	12	3	1894
246	Earling, E. J.	6657	5140	Steel.	10000	525'	55'	31'	32	3	1906
214	Easton (Can.)	1757	1129	Steel.	2800	250'	42' 6"	18' 6"	6	3	1912
268	Edenborn, Wm.	5910	4531	Steel.	8300	478'	52'	30'	15	6	1906
47	Edmonton (Can.) . . .	1982	1340	Steel.	3000	249'	42' 8"	23'	6	3	1906
267	Elba	4963	3621	Steel.	7300	420'	52'	28'	23	4	1907
145	Elphicke, Mary C. . .	4904	3879	Steel.	7300	430'	50'	28' 6"	24	3	1901
218	Ellen	349	194	Wood.	Sand	120'	30' 6"	8'			1893
268	Ellwood, Isaac L. . .	5904	4526	Steel.	8300	478'	52'	30'	15	6	1900
47	Emperor (Can.)	7031		Steel.	10000	525'	56'	31'	30	5	1911
268	Empire City	4118	1268	Steel.	6300	405'	48'	28'	12	4	1897
336	Eric, W. (Can.)	1183		Wood.	1500	224' 7"	35' 4"				1882
268	Ericsson, John	3200	2378	Steel.	5800	390'	48'	27'	11	4	1896
Barges											
242	Eddy, John F.	1678	1252	Wood.	2600	259'	37' 6"	20'			1886
245	Edwards, J. R.	435	413	Wood.	800	175' 2"	30' 6"	12' 2"	5	1	1883
118	Ewen, Frank D. (Can.)	882		Wood.	1750	202'	37'	16'			1888
108	Edgewood (Can.) . . .	699		Wood.	1200	191' 1"	36' 8"	15' 5"			1918
48	Edith (Can.)	353		Wood.	600	130'	27'	11'			1897
54	Empire (Can.)	768		Steel.	160	40'	12'				1906
111	Empire No. 1 (Can.)	518		Wood.	1006	170'	31' 5"	12' 4"			1880
224	Ethel (Can.)	399		Wood.	600	158'	27' 9"	11'			1897

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tches	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
47	Fairfax (Can.)	1424	984	Wood.	2100	209'	38'	19'			1890
268	Fairbairn, Sir Wm.	4219	3181	Steel.	6000	414'	45' 6"	28'	12	4	1896
268	Farrell, James A. . .	7705	5967	Steel.	11500	580'	58'	32'	34	3	1912
135	Favorite (Wrecker).			Steel.		173'	40'	16'			1919
238	Fellowcraft	2070		Wood.	2800	256'	40'	21' 6"	9		1888
268	Filbert, Wm. J.	7962	6189	Steel.	12000	585'	60'	32'	36	4	1907
110	Fitzgerald, R. P.	1681	1175	Wood.	2300	256'	38'	20'	7	1	1887
317	Fitzgerald, Wm. E. . .	5300	3701	Steel.	7300	420'	52'	28'	23	4	1906
343	Fleetwood	1687	1175	Wood.	2300	265' 6"	40' 6"	19' 4"			1887
141	Follette, James W. . .	756	538	Wood.		212' 3"	35' 6"	12'	5	1	1881
246	Ford, Emory L.	7986	....	Steel.	12000	580'	60'	32'	35		1916
239	Ford, J. C.	609	710	Wood.	950	172'	33'	12'	4	1	1889
274	Foster, Parks	1729	1475	Steel.	2900	262'	38'	23'	7	3	1889
316	Foster, I. N.	355	277	Wood.	500	134' 9"	26'	11' 6"			1872
2	Franz, W. C. (Can.) .	3428	2029	Steel.	5600	346'	48'	28'	10	3	1901
145	French, G. Watson.	3883	2725	Steel.	5600	356'	50'	28'	18	3	1903
268	Frick, Henry C.	6490	5016	Steel.	10500	549'	56'	31'	34	2	1905
92	Fryer, Robt.L.(Can.)	1810	1451	Wood.	3100	281'	41' 4"	20'	8	1	1888
268	Fulton, Robert	4219	3181	Steel.	6000	414'	45' 6"	28'	12	4	1896
Barges											
115	Filer, Grace M. (Can.)	215		Wood.	450	128'	27'	9'			1874
118	Filmore, C. J.	410	389	Wood.	750	161'	31'	10' 3"	4	1	1889

145	Fitch, W. F.	3629	Steel.	5000	346'	48'	28'	10	1907
253	Fitch, Edson (Can.) ..	171	Wood.	300	120'	24'	7' 9"		1904
90	Ford River (Can.) ..	299	Wood.	550	143'	29'	10' 8"		1879
106	Forancombe, J. A. ...	658	625	1300	180'	36'	13'	5	1889
25	Francombe (Can.)	373	Wood.	650	137'	26'	12'		1873
268	Fritz, John	4693	4447	7900	436'	50'	28' 6"	15	1898
158	Fryer, Robt. L.	527	501	1000	175'	33' 3"	11' 3"	5	1880
Steamers									
268	Gary, Elbert H.	6331	4938	10500	549'	56'	31'	34	1905
346	Garretson, General ..	6765	5371	9600	520'	54'	31'	16	1907
268	Gates, John W.	5946	4440	8300	478'	52'	30'	15	1900
321	Gladstone	2453	1913	3000	283'	40'	23'		1888
269	Glenisla (Can.) ....	....	....	7000	416'	50'	29'	12	1903
269	Glenlivet (Can.)	1360	1039	2700	266'	38'	24'	8	1891
269	Glenlyon (Can.)	2759	1645	3000	328'	42'	25'	9	1893
184	Glen Allen (Can.) ..	276	....	....	....	....	....		1912
269	Glenbar (Can.) ....	....	....	3200	274'	40'	24' 4"	7	1890
269	Glencadam (Can.) ..	....	....	244'	43'	....	21'	6	1913
269	Glencalm (Can.) ....	....	....	3000	266'	41'	25' 6"		1893
269	Glenfinnan (Can.) ..	2400	....	3006	324'	42'	23' 9"	10	....
224	Glenmount (Can.)	2111	....	3300	302'	40'	21' 5"	9	....
269	Glenushee (Can.)	5667	....	9000	480'	54'	30'	14	1903
269	Glenstriven (Can.) ..	....	....	3200	274'	41'	6"	7	1889
54	Gogebic	1680	1312	2500	275'	40' 4"	19' 6"	7	1837
222	Goodyear, Frank H. ..	....	....	12000	530'	60'	32'	35	1917
230	Gould, Harvey D.	6617	5219	9700	525'	55'	31'	32	1906
19	Grammer, G. J.	4471	3703	6600	434'	48'	28'	13	1902
72	Grand Island	5630	....	8500	480'	52'	30'	14	1905
106	Green, C. H.	694	504	950	192' 6"	33'	12' 8"	4	1881
113	Greene, M. T.	523	422	750	155'	30'	11' 6"	4	1887
60	Griffin	1879	1526	2700	266'	38'	24'	8	1891

Steamers

268	Gary, Elbert H.	6331	4988	Steel.	10500	549'	56'	31'	34	2	1905
346	Garretson, General .	6765	5371	Steel.	9600	520'	54'	31'	16	4	1907
268	Gates, John W.	5946	4440	Steel.	8300	478'	52'	23'	15	6	1900
321	Gladstone	2453	1913	Wood.	3000	283'	40'	20'	1888		
269	Glenisla (Can.) ....	....	....	Steel.	7000	416'	50'	29'	12	8	1903
269	Glenlivet (Can.)	1360	1089	Steel.	2700	266'	38'	24'	8	3	1891
269	Glenlyon (Can.)	2759	1645	Steel.	3000	328'	26'	25'	9	3	1893
184	Glen Allen (Can.) ...	276		Wood.		112' 8"	42'	8' 5"			1912
269	Glenbar (Can.)			Steel.	3200	274'	40'	24' 4"	7		1890
269	Glencadam (Can.) ..			Steel.		244'	43'	21'	6		1913
269	Glencalm (Can.)			Steel.	3000	266'	41'	25' 6"			1893
269	Glenfinnan (Can.) ..	2400		Steel.	3006	324'	42'	23' 9"	10		
224	Glenmount (Can.) ...	2111	....	.....	3300	302'	40'	21' 5"	9		
269	Glenshee (Can.)	5667	....	Steel.	9000	480'	54'	30'	14	3	1903
269	Glenstriven (Can.) ..			Steel.	3200	274'	41' 6"	24' 4"	7		1889
54	Gogebic	1680	1312	Wood.	2500	275'	40' 4"	19' 6"	7	1	1887
222	Goodyear, Frank H. .	....	....	Steel.	12000	580'	60'	32'	35	3	1917
280	Goulder, Harvey D. .	6617	5219	Steel.	9700	525'	55'	31'	32	3	1906
19	Grammer, G. J.	4471	3703	Steel.	6600	434'	48'	28'	13	5	1902
72	Grand Island	5630	....	Steel.	8500	480'	52'	30'	14	4	1905
106	Green, C. H.	694	504	Wood.	950	192' 6"	33'	12' 8"	4	1	1881
113	Greene, M. T.	523	422	Wood.	750	155'	30'	11' 6"	4	1	1887
60	Griffin	1879	1526	Steel.	2700	266'	38'	24'	8	3	1891

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
36	Groh, Mary	139	69	Wood	Sand	112'	22'	8'			1873
44	Gunnell, E.	688	468	Steel.	Sand	170'	36'	10'			1912
Barges											
224	Gaskin, John (Can.)	521	487	Wood.	900	165' 8"	31' 4"	12'			1881
195½	Gawn, Thomas	549	522	Wood.	1000	170' 8"	31' 7"	13' 6"	6	1	1872
208	Genoa.	730	694	Wood.	1200	188' 9"	34' 1"	13' 2"	5	1	1873
58	Geoger, F. A. (Can.)	825	784	Wood.	1500	200' 6"	35' 4"	15'			1874
141	Gladys H. (Can.) ..	1045	.....	Wood.	1700	211'	34' 8"	16' 9"			1892
224	Godfrey, Jermiah ..	653	620	Wood.	1250	177'	34' 9"	14'	6	1	1881
272	Golden Age	1846	1763	Wood.	3100	278'	37' 8"	20'	8	1	1882
31	Goldman, Celina K. (Can.)	478	.....	Wood.	900	158' 8"	35'	12' 4"			1918
22	Goshawk	501	461	Wood.	950	180'	32' 4"	11' 6"	5	1	1866
91	Grampian	844	802	Wood.	2200	218'	38'	13' 2"	1		1894
91	Granada	1729	1643	Wood.	3200	247'	40'	21' 6"	1		1895
100	Grandee (Can.)	1262	.....	Wood.	1800	197' 2"	38' 5"	23' 8"			1873
7	Grant, Levi	204	194	Wood.	400	127'	27'	8'			1872
345	Gray, John (Can.) ..	156	.....	Wood.	300	110'	32'	7' 4"			1881
11	Guido (Can.)	135	.....	Wood.	250	114'	24'	8'			1856
Steamers											
47	Haddington	1603	1010	Steel.	3000	243'	42'	18'	6	3	1904
47	Hagarty, J. H. G. (Can.)	7462	5704	Steel.	10000	529'	58'	31'	16	6	1914
253	Hall (Can.)	247	130	Comp.	300	102' 8"	22' 5"	7' 4"			1889

		1152	962	Wood.	1500	213'	35'	19'	6	1	1881
348	Hall, Henry B. (Can.)	1152	962	Wood.	1500	213'	35'	19'	6	1	1881
188	Hall, Stephen C. (Can.)	447	307	Wood.	550	161' 2"	30' 5"	10' 6"	4	1	1830
47	Hamiltonian (Can.)	2346	1277	Steel.	3000	244'	42' 6"	26' 6"	6	3	1912
280	Hanna, H. M., Jr.	6204	4689	Steel.	9000	504'	54'	30'	15	3	1908
145	Hanna, Leonard C.	6356	4922	Steel.	9500	504'	54'	30'	30	3	1905
126	Harlow	575	482	Wood.	1000	194'	35'	10' 6"	5	1	1891
143	Harriet B.	.....	.....	Wood.	4000	283'	53' 6"	17' 7"	7	3	1895
323	Hart, Frank W.	4307	3374	Steel.	6300	380'	50'	28'	11	4	1902
268	Harvard	5054	4061	Steel.	7500	454'	50'	28' 6"	14	6	1900
351	Harvester, The	7138	5690	Steel.	10200	525'	58'	31'	32	3	1911
268	Harvey, A. F.	4858	.....	Steel.	6300	420'	50'	28'	12	4	1904
328	Harvey, F. E.	355	288	Wood.	Sand	133'	31'	7' 6"	.....	.....	1899
192	Hausler, M. G.	73	414	Steel.	Sand	144'	35'	10'	25	3	1910
162	Hazard, F. R.	5494	.....	Steel.	8500	444'	56'	30'	3	.....	1910
208	Hazard, W. A.	372	267	Wood.	500	154'	29'	11' 8"	3	.....	1890
346	Hebard, Chas. S.	6291	4854	Steel.	9500	504'	54'	30'	30	3	1906
328	Heiden, Charles	717	446	Steel.	Sand	160'	35'	14'	5	1	1913
35	Helen C.	622	460	Wood.	900	186'	35'	12' 4"	5	1	1874
267	Hemlock	4796	3501	Steel.	7300	420'	52'	28'	23	4	1907
194	Hennipin	990	639	Wood.	1200	208' 8"	35'	12' 4"	.....	.....	1888
151	Hettler, H. H.	789	536	Wood.	1200	210'	34' 7"	13' 3"	5	1	1890
155	Hickey	131	34	Wood.	.....	108'	24'	8'	.....	.....	1901
268	Hill, James J.	6026	4578	Steel.	8300	478'	52'	30'	15	6	1900
145	Hill, Lewis W.	.....	.....	Steel.	10500	525'	58'	31'	32	3	1901
99	Hilton	166	166	Wood.	250	110'	26' 6"	7' 4"	.....	.....	1901
46	Holcomb, Ralph T. (Can.)	375	250	Wood.	450	133'	30'	9' 6"	.....	.....	1901
323	Hoover & Mason	5841	4578	Steel.	9500	504'	54'	30'	16	3	1901
234	Horn, Chas.	847	.....	Wood.	1200	182'	42' 9"	13' 3"	5	1	1883
268	Houghton, Douglas	5332	4034	Steel.	7300	456'	50'	28'	14	4	1901
109	Houghton, H.	210	.....	Wood.	.....	.....	27'	10'	.....	.....	1901

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
268	House, Francis E.	7769	5943	Steel.	12000	585'	60'	32'	36	4	907
336	Howard W. (Can.)	1517	....	Wood.	1800	225' 2"	37' 8"	20' 3"	6	1	1891
267	Hoyt, James H.	4364	3234	Steel.	6600	404'	50'	27'	23	6	1902
134	Hubbard, Chas.	4846	4287	Steel.	7600	438'	52'	28'	13	3	1907
280	Hubbard, C. Russell.	6839	5389	Steel.	10200	532'	56'	31'	32	3	1906
354	Huron	4810	3051	Steel.	6000	416'	56'	30'	21	3	1914
279	Huron City	368	277	Wood.	500	167' 8"	29'	10' 8"	3	1	1367
330	Hyacinth	738	....	Steel.	150'	28'	28'	14'	....	....	1903
162	Hutchinson, J. T.	3734	2780	Steel.	5500	346'	48'	28'	17	3	1901
163	Hydro	1282	872	Steel.	....	169'	40'	19'	....	....	1913
267	Hydrus	4661	....	Steel.	6800	410'	50'	28'	22	4	1399
Barges											
231	Halstead	496	....	Wood.	900	171' 1"	33' 4"	12' 6"	4	....	1873
84	Hamilton (Can.)	970	970	Comp.	1900	202'	41'	13'	6	3	1901
224	Hamilton (Can.)	970	....	Comp.	1900	202'	41'	13'	6	....	1901
103	Harriet D. (Can.)	460	....	Wood.	756	161' 6"	32' 2"	11'	6	1	1885
138	Harrison, Ben	538	511	Wood.	1000	175'	32' 2"	12'	....	....	1889
250	Harsen	531	....	Wood.	1000	144'	40'	10' 7"	....	....	1916
73	Hartnell, Geo. E.	3265	3124	Steel.	5600	352'	42'	27'	11	3	1896
13	Hector (Can.)	539	....	Wood.	1000	170' 3"	35' 5"	11' 9"	....	....	1882
356	Helvetia	793	753	Wood.	1500	204' 6"	35' 6"	13' 8"	6	....	1873
224	Hilda (Can.)	418	....	Wood.	800	160'	30'	12' 3"	....	....	1898
107	Holland, Grace	629	597	Wood.	1200	189' 6"	33'	12' 8"	5	1	1880
22	Holland, Nelson C.	564	536	Wood.	1000	187' 6"	31' 8"	11' 2"	5	1	1881
268	Holley, Alex.	2721	2554	Steel.	6300	361' 6"	46'	26'	12	3	1896

Steamers

165	Imperial (Oil) (Can.)	636	Steel.	162' 4"	25'	5"	7'	4"	1889				
165	Imperoyal (Oil) (Can.)	2253	1384	Steel.	Oil	249' 6"	43'	1"	19' 8"	1913			
165	Impoco (Oil) (Can.)	1683	Steel.	242'	40'	1"	20'	1910					
224	India (Can.)	976	573	Wood.	1700	215' 9"	36'	4"	15'	1899			
267	Indus	3871	2997	Steel.	5600	356'	50'	28'	10	3	1901		
165	Ioncalite (Can.)	.....	....	Steel.	250'	43'	18'	1916					
165	Iocoma (Can.)	1669	Steel.	Oil	248' 2"	42'	6"	15'	6"	1912			
47	Ionic (Can.)	1708	1030	Iron..	2000	231'	35'	6"	24'	6"	6	4	1872
182	Ireland, Robert L.	6387	4889	Steel.	9500	504'	54'	30'	30	4	1914		
47	Iroquois (Can.)	2359	1452	Steel.	3500	247'	43'	25'	6"	6	2	1902	
142	Iselin, Adrian	2072	Steel.	3000	244'	43'	26'	4	1915				
72	Ishpeming	6924	5476	Steel.	10000	530'	56'	31'	31	3	1906		

Barges

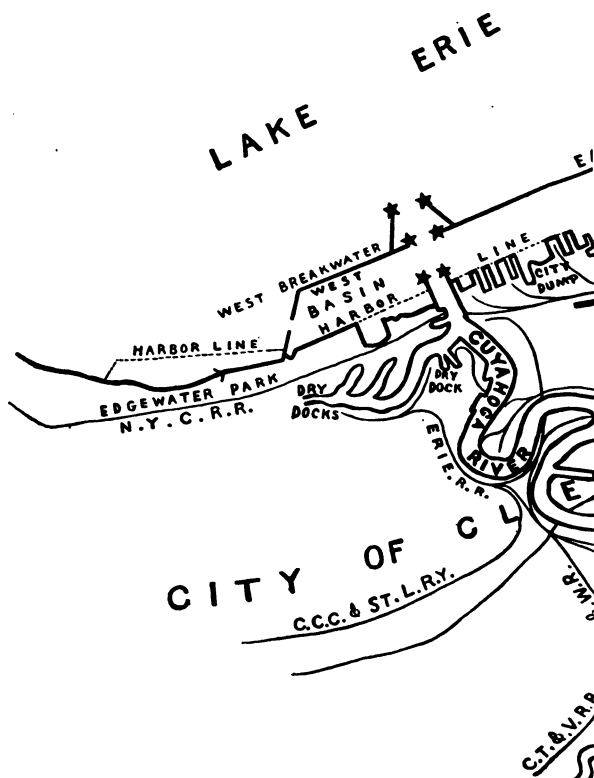
54	Imperial (Can.)	413	Wood.	120'	38'	7'	5"	1902
144	Interlaken	567	538	1100	170'	34'	2"	5 1 1893
213	Inverneill (Can.)	1340	Steel.	3000	238'	36'	21'	2 1895
213	Inversnaid (Can.)	1318	Steel.	3000	238'	36'	2"	1892
13	Ireland (Can.)	339	Wood.	700	147'	28'	9'	1863
272	Iron Cliff	1116	1077	2000	212' 4"	35'	18'	6 1 1881
253	Iona (Can.)	158	Wood.	111' 8"	22'	9"	7'	1890

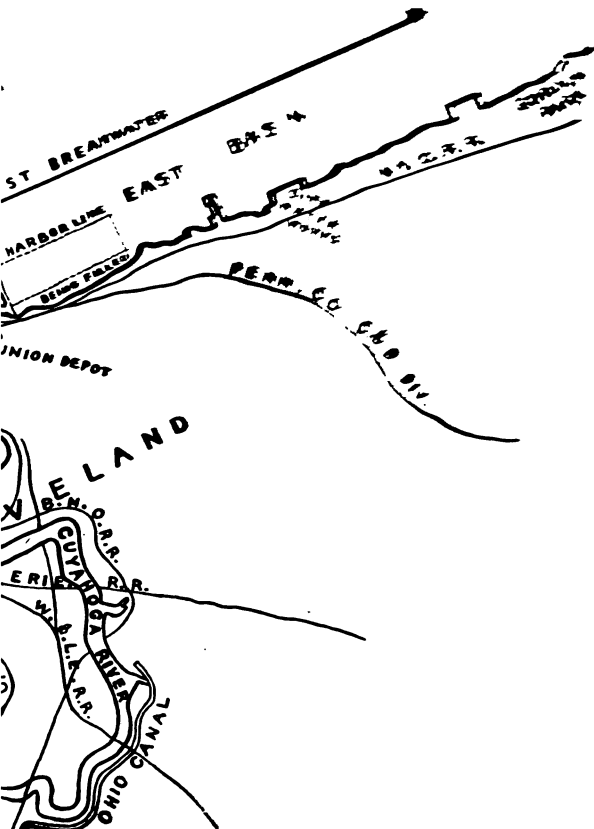
Steamers

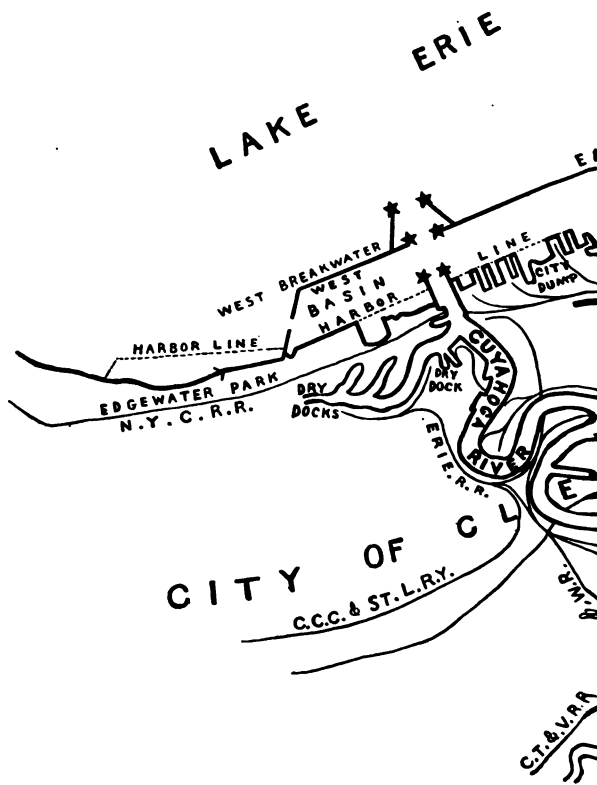
143	Jacob, C. W.	2062	1714	Wood.	3000	298'	41'	21'	9	2	1891
171	Jenkins, Chas. O.	6285	4287	Steel.	9500	504'	54'	30'	30	3	1907
304	Jex, H. N. (Can.)	420	479	Wood.	650	169' 4"	26'	5"	10'	3"	1868
19	Jones, B. F.	6939	5492	Steel.	10000	530'	56'	31'	32	3	1906
267	Jones, H. R.	5315	.....	Steel.	7700	448'	52'	28'	25	6	1903
224	Joyland (Can.)	1845	Wood.	240'	39'	25'	1884				

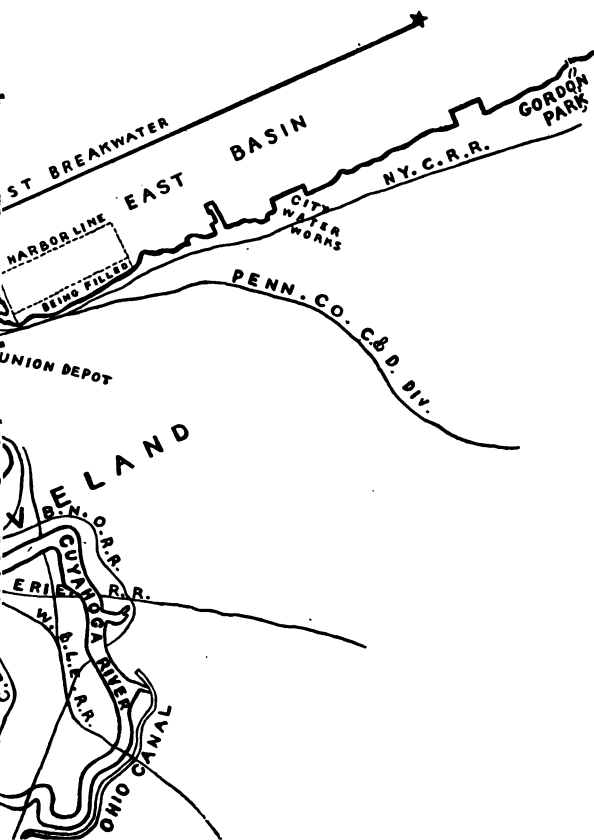
GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. Hatches	No. Comp.	Year Built
						Keel Length	Beam	Depth			
Steamers											
47	Juno (Can.)	288	196	Wood.	350	139' 7"	26' 8"	8' 8"	4		1895
267	Jupiter	3719	2769	Steel.	5600	346'	48'	28'	10	3	1901
Barges											
345	Jackson (Can.)	157		Wood.	300	110' 7"	21' 3"	7' 8"			1881
262	Jackson, G. K. (Can.)	400	....	Wood.	700	163' 6"	31'	9' 1"	4	1	1882
23	Jennette (Can.)	329		Wood.	700	141'	28'	11'			1881
268	Jenny, W. Le Baron	3422	3280	Steel.	6000	378'	45'	26'	11	3	1897
121	Jessie	201		Wood.		112'	24'	9'			1900
69	Jones, Chester B.	493	470	Wood.	900	167'	30' 3"	12'	5	1	1873
116	Joses	120	114	Wood.	225	99' 9"	24'	7' 1"			1866
172	Judd, E. T.	389	369	Wood	800	149' 6"	29' 6"	11' 4"			1872
253	Jumbo (Can.)	159		Wood.	300	106'	22' 6"	7' 2"			1883
Steamers											
232	Kalkaska	679	555	Wood.	900	178'	33' 9"	15' 6"	4	1	1884
45	Kearsarge	3092	2721	Steel.		328'	44'	27'			1894
179	Kelly Island	881	414	Steel.	Sand	175'	38'	10' 6"			1914
142	Kendall, Harvey J.	398	264	Wood.	500	141' 7"	31'	9' 4"	5	1	1892
222	Kennedy, Hugh	7064	5500	Steel.	10200	532'	56'	32'	32	3	1907
268	Kerr, D. G.	7556	....	Steel.	12000	580'	60'	32'	35	3	1916
141	Ketchum, J. B., 2d (Can.)	1109	763	Steel.	1500	193'	40' 6"	13'	4	1	1892









GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built	
						Keel L'th	Beam	Depth				
Steamers												
135	Lakewood	1917	1677	W & I.	266'	38'	26'				1884	
135	Landbo (Can.)	2292	....	Wood.	3200	280'	41' 5"	20'		8	3	1890
220	Langell, Simon	845	677	Wood.	1200	195' 4"	34' 6"	13' 7"			1	1886
19	Laughlin, James	6939	5492	Steel.	10000	530'	56'	31'		32	3	1906
141	Lehigh (Can.)	4037	2844	Iron	1800	238'	36'	15' 4"		6		1880
134	Leonard, Geo. B. . . .	6929	5245	Steel.	6300	330'	50'	28'		11	4	1903
162	Leopold, N. F.	1308	1342	Steel.	10200	532'	56'	31'		32	3	1908
76	Lewiston	1294	1342	Comp.	3000	272'	38'	21'		8	3	1886
142	Liberty	894	708	Wood.	2200	240'	39' 6"	18'				1894
252	Linden	4328	3196	Wood.	1500	206'	35'	12' 8"		5	1	1895
268	Linn, Wm. R.	324	241	Steel.	5800	400'	48'	28'		12	4	1898
328	Little, C. H.	2134	1622	Wood.	Sand	144'	28'	8'				1903
86	Livingstone	6634	4927	Comp.	3300	281'	41'	22'		7	1	1889
280	Livingstone, Wm. . . .	3871	2997	Steel.	10200	532'	58'	31'		30	3	1908
267	Lupus	3582	2778	Steel.	5600	356'	50'	28'		10	3	1901
73	Luzon	7240	5450	Steel.	5400	346'	48'	28'		10	4	1902
268	Lynch, Thomas			Steel.	11500	580'	58'	32'		36	3	1907
Barges												
13	Lapwing (Can.)	516		Wood.	1000	175' 7"	31' 2"	12'				1892
232	Liberty	673	538	Comp.	1800	234'	36'	13'				1878
40	Lozen, J. B.	565		Wood.	1100	178'	32' 6"	12' 4"		6	1	1890
95	Lyon, Mary (Can.) . . .	334	310	Wood.	600	138'	26' 2"	12'				1874

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
159	Mary H.	159		Wood.	Sand	116'	29' 5"	7' 2"			1886
268	Mataafa.	268		Steel.	7300	430'	50'	28' 6"			1899
277	Manistique	474	382	Wood.	500	157'	31'	12' 6"			1882
224	Manola.			Steel.	3300	282'	40'	24' 6"	9	3	1890
268	Maricopa.	4223	3669	Steel.	5800	406'	48'	28'	12	4	1896
227	Marion.	930	....	Wood.	202'	202'	35'	15'			1889
268	Mariposa.	2831	2306	Steel.	4100	330'	45'	24' 6"	9	3	1892
268	Maritana.	2957	2429	Steel.	4100	320'	45'	24' 6"	9	3	1892
41	Markham, Geo. C.	309	250	Wood.	450	141'	28'	10' 8"	3	1	1883
72	Marquette.	4956	....	Steel.	7200	420'	52'	28'	12	3	1906
267	Mars.	4377	....	Steel.	6800	416'	50'	28'	22	4	1899
103½	Marshall, Maggie.	365	279	Wood.	400	150'	30'	11' 4"	3	1	1873
217	Marshall, Samuel (Can.)	755	540	Wood.	1100	198'	34'	16' 6"	5	1	1888
47	Martian (Can.)	3396	2010	Steel.	5600	346'	48'	28'	10	3	1901
268	Mather, Samuel.	1713	1318	Steel.	3500	308'	38'	24'	12	1	1892
267	Mather, Samuel.	6751	5408	Steel.	10500	530'	60'	31'	32	3	1906
72	Mather, Wm. G.	6838	5183	Steel.	10000	513'	60'	31'	30	3	1905
47	Matthews, W. D. (Can.)	3965	2450	Steel.	5600	358'	48'	28'	10	4	1903
197	Mauch Chunk.	4449	3609	Steel.		331' 7"	50' 5"	28'			1901
268	Maunaloa.	4951	4004	Steel.	7000	430'	50'	28' 6"	13	6	1899
122	Maytham, Thomas.	2329	1972	Steel.	3600	286'	41'	24'	8	1	1892
122	Mecosta.	1776	1418	Wood.	3000	281'	40'	20'	7	1	1888

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
162	Mullen, Martin	4635	3471	Steel.	7500	416'	50'	28'	23	4	1904
136	Muncy	3863	2946	Steel.		350'	46'	30'			1902
72	Munising	4309	....	Steel.	6300	380'	50'	28'	11	4	1902
268	Murphy, Simon J.	4869	3770	Steel.	7400	428'	51' 6"	28'	13	4	1900
	M. & M. C. No. 2	405	538	Wood.	500	149' 6"	30'	10' 6"	3		1890
Barges											
100	Mable (Can.)	247		Wood	500	127' 7"	25' 8"	12' 9"			1892
176	Magill, C. J. (Can.)	334		Wood.	600	141'	30' 5"	11' 8"			1863
268	Magna	3259	3124	Steel.	5800	352'	44'	26'	11	3	1896
268	Maia	3804	3442	Steel.	6300	376'	48'	26'	12	3	1898
268	Maida	3474	3210	Steel.	6300	376'	46'	26'	12	3	1898
145	Maitland, Alex.	3351		Steel.	5700	366'	44'	26'			1902
224	Mamie (Can.)	370		Wood.	700	129' 4"	28'	11' 2"			1897
268	Manda	3256	3121	Steel.	5500	352'	44'	26'	11	3	1896
268	Manila	5039	4667	Steel.	7900	436'	50'	28' 6"	14	6	1899
268	Marcia	2237	2132	Steel.	4000	302'	40'	25'	9	3	1895
268	Marsala	5039	4667	Steel.	7900	436'	50'	28' 6"	14	6	1900
91	Matanzas	2600	2525	Wood	4500	324'	45' 6"	21' 6"	11	1	1899
268	Martha	3256	3121	Steel.	5500	352'	44'	26'	11	3	1896
142	Mathews, Jennie	332	316	Wood	500	138'	26'	12'			1874
13	Melrose (Can.)	740	740	Wood.	1300	183' 6"	35' 8"	14'			1895
13	Menominee	451	433	Wood	900	166' 2"	33' 1"	10' 9"			1883
305	Merrill, Julia B. (Can.)	200	190	Wood.	500	152'	27'	8' 5"	4	1	1872

270	Minch, Sophia (Can.)	538	Wood.	1100	184'	33'	13' 8"	5	1	1873
272	Mingoe	712	Wood.	1300	198' 6"	36'	12'	6	1	1893
22	Miztec	777	Wood.	1350	194'	34' 6"	14'	5		1890
91	Montezuma	2722	Wood.	4900	342'	46'	21' 6"	11	1	1903
270	Moran, David	372	Wood.	750	162'	36'	9'			1901
208	Mowatt, James	523	Wood.	950	166' 4"	33' 1"	13'	5	1	1884
332	Mowatt, Oliver (Can.)	244	Wood.	500	131' 2"	25' 9"	10' 6"			1873
306	Mueller, Minnie	199	Wood.	400	120'	26' 4"	9' 7"			1867
270	Muir, A. (Can.)	330	Wood.	500	138'	23' 9"	11' 4"			1874
253	Muriel (Can.)	192	Wood.	350	121' 9"	24' 6"	7' 5"			1886
13	Muskoka (Can.)	482	Wood.	900	149'	26'	11' 6"			1872
Steamers										
72	Negaunee	4305	Steel.	6300	380'	50'	28'	11	4	1902
268	Neilson, James B.	2234	Steel.	3500	308'	42'	25'	8	1	1892
267	Neptune	3717	Steel.	5600	346'	48'	28'	10	3	1900
234	Nessen, N. J.	440	Wood	500	149'	37'	11' 5"	3	1	1880
134	Nettleton, A. E.	6286	Steel.	9800	528'	55'	31'	31	3	1908
101	Nevada (Can.)	1257	Steel.	2000	230'	34' 1"	21' 1"	4		1890
145	Newbald, A. E.	6971	Steel.	10200	530'	56'	31'	32	3	1908
119	Newona (Can.)	2179	Steel.		250'	43' 5"	25'			1909
24	Niagara	1201	Steel.	3000	266'	42'	20'			1897
224	Nicaragua	911	Wood.	2400	241'	37'	22' 8"			1894
144	Niko	814	Wood	1150	189'	35'	13'	4	1	1889
344	Normandie	3861	Steel.	5000	350'	46'	30'			1909
136	North Lake	3921	Steel.	5000	350'	46'	30'			1909
136	North Sea	3849	Steel.	5000	350'	46'	30'			1909
136	North Star	5667	Steel.	3500	480'	52'	30'	14	3	1906
280	Norton, David Z.	5667	Steel.	3500	480'	52'	30'			1906
134	Norway	6673	Steel.	9700	504'	58'	30'	29	3	1910

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
134	Nottingham, Wm. . .	4234	3070	Steel.	6300	380'	50'	28'	11	4	1902
162	Nye, Harold B.	4256	....	Steel.	6300	380'	50'	28'	20	4	1902
	Noton, D. Z.	5667	4250	Steel.	8500	480'	52'	30'	12	3	1906
Barges											
224	Nadine (Can.)	484	....	Wood.	900	166'	29' 8"	12' 6"			1899
268	Nasymith, James . . .	3422	3162	Steel.	5700	366'	44'	26'	11	3	1896
176	Nau, Libbie	236	198	Wood.	450	129'	26' 6"	10'			1867
205	New Dominion (Can.)	196	....	Wood.		117' 6"	25' 3"	9' 2"			1868
175	Newland, J. B. (Can.)	145	....	Wood.	300	111' 4"	26' 2"	7' 7"			1870
144	Norris, Alice B.	692	589	Wood.	1300	194'	32' 4"	13' 2"	6		1872
174	Norway (Can.)	332	....	Wood.	600	135' 5"	26'	11' 9"			1873
268	No. 137	2480	2367	Steel.	5500	352'	45'	26'	12	3	1896
Steamers											
227	Oades, John	1454	1225	Wood.	1900	212'	36'	24'			1890
246	Oakes, H. K.	6215	....	Steel.	9200	504'	52'	30'	29	3	1907
224	Oatland (Can.)	1854	....	Wood.		241' 7"	36' 7"	24'			1884
338	Oceanica	1490	....	Wood.	2500	263'	37' 3"	21'	6	1	1881
267	Odanah	4907	3588	Steel.	7300	420'	52'	28'	23	4	1907
120	Ogemaw	594	325	Wood	650	162' 6"	30'	11' 4"	3	1	1861
122	Oglebay, E. W.	3666	3019	Steel.	5200	375'	45'	26'	10	3	1896

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Hull No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
323	Philbin, D. M.	6272	4826	Steel.	9500	504'	54'	30'	30	3	1905
268	Phipps, Henry	7240	5450	Steel.	11500	580'	58'	32'	36	3	1907
162	Pierce, E. L.	5494	....	Steel.	8500	444'	56'	30'	25	3	1910
72	Pioneer	6316	....	Steel.	9500	504'	54'	30'	30	3	1906
268	Poe, Gen. Orlander M.	5619	4144	Steel.	7800	470'	50'	29'	15	4	1900
19	Pollock, W. G.	4872	3585	Steel.	7300	420'	52'	28'	23	4	1906
162	Polynesia	3640	2596	Steel.	5700	376'	46'	26'	11	3	1897
72	Pontiac	2298	1788	Steel.	3500	300'	40'	24'	8	3	1889
282½	Powell, L. G.	143	....	Wood.	105'	105'	27' 5"	6'			1903
208	Prentice, J. H.	535	398	Wood.	850	167' 6"	32'	12' 2"	4	1	1885
72	Presque Isle	4578	3570	Steel.	6600	406'	50'	28'	12	4	1898
268	Princeton	5125	3820	Steel.	7500	454'	50'	28' 6"	14	6	1900
Barges											
22	Page, Marion W.	762	712	Wood.	1200	193'	34'	13' 8"	6	1	1876
85	Pease, E. S. (Can.) .	338		Wood.	600	160'	25' 6"	11'			1905
179	Pellatt, J. H.	346	296	Steel.	1500	179'	35'	15'			1889
47	Pennington, B. L. .	1142	1085	Wood.	2200	239'	38' 2"	14' 6"			1889
22	Peshigo	633	601	Wood.	1000	201'	34' 4"	12'	6	1	1889
	Power, Wm. (Can.) .	168		Wood.	320	112' 8"	22'	8' 2"			1904
123	Progress	828	844	Wood.	1800	255'	37'	21'			1880
Steamers											
268	Queen City	3979	3198	Steel.	5800	400'	48'	28'	12	1	1896

Barges											
224	Quebec (Can.)	1016	989	Steel.	1900	206'2"	40'	14'	6"	6	1901
339	Quale, Thos.		610	Wood.	1200	180'5"	30'	32'	5"		1872
Steamers											
22	Ralph, P. J.	964	658	Wood.	1200	211'5"	37'	14'		5	1 1889
323	Ranney, Rufus P.	4797	3505	Steel.	7300	420'	52'	28'		12	4 1908
268	Ream, Norman B.	7053	5444	Steel.	11500	580'	58'	32'		36	3 1906
179	Recor, E. P.	368	232	Wood	600	123'	30'	9'	9"		1902
24	Reeb, M. A.	3762	....	Steel.	5800	360'	50'	28'		10	4 1903
267	Reed, James H.	5598	4125	Steel.	7700	448'	52'	28'		25	6 1903
346	Rees, W. D.	3760	2992	Steel.	5800	396'	45'	28'		12	4 1896
165	Regmolite (Can.)	2631	....	Steel.		250'	43' 8"	23'	5"		1917
268	Regulus	4805	....	Steel.	6800	416'	50'	28'		12	4 1900
278	Reiss, Clemens A.	4897	....	Steel.	7000	430'	50'	28'	6"	13	6 1901
278	Reiss, John P.	6432	4963	Steel.	9500	504'	54'	30'		30	4 1910
278	Reiss, Wm. A.	5002	....	Steel.	7000	430'	50'	28'	6"	13	3 1901
278	Reiss, Richard J.	4997	....	Steel.	7000	430'	50'	28'	6"	13	3 1901
278	Reiss, Otto M.	4897	....	Steel.	7000	430'	50'	28'	6"	13	6 1901
278	Reiss, Peter	5923	4217	Steel.	9500	504'	54'	30'		30	4 1910
309	Renown	4154	2098	Steel.	Oil	373'	52'	25'			1912
268	Rensselaer	5124	3827	Steel.	7800	454'	50'	28'	6"	14	2 1900
145	Replogie, J. L.	6996	....	Steel.	10500	549'	56'	31'		34	3 1906
19	Rhodes, Joshua W.	4872	3586	Steel.	7300	420'	52'	28'		23	4 1906
141	Rhodes, R. R. (Can.)	1598	957	Wood.	2400	246'	40'	21'		6	1 1887
336	Richard, W. (Can.)	....	....	Wood.	2000	228'	36' 3"	19'		6	1 1891
268	Richardson, R. R.	4644	....	Steel.	6800	416'	50'	28'		12	4 1902
286	Richardson, W. C.	4937	....	Steel.	7200	420'	52'	29'		12	4 1908
281	Richland Queen	2228	....	Wood.	3300	295'	44'	21'		8	1 1898
281	Richland Star	2051	....	Wood.	3200	298'	41'	21'		16	2 1891

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

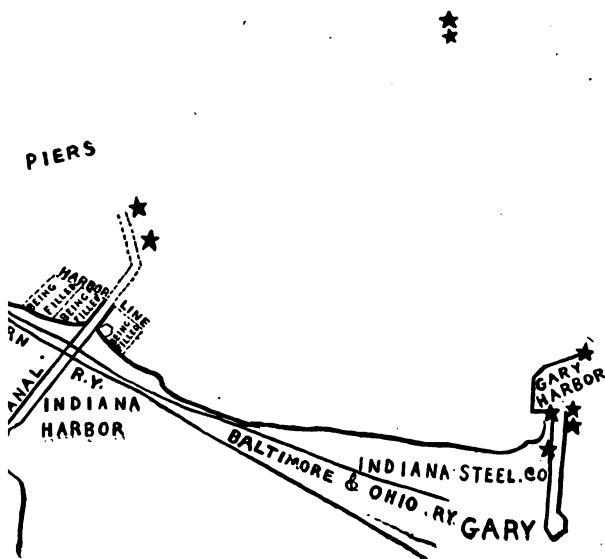
Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. Hatches	No. Comp.	Year Built
						Keel L. x B.	Beam	Depth			
Steamers											
214	Riverton (Can.)	4466	...	Steel.	7000	452'	48'	28'	14	4	1896
19	Robbins, Francis L.	4222	3036	Steel.	6200	380'	50'	28'	20	3	1905
346	Robbins, S. H.	4909	3617	Steel.	7300	444'	50'	28' 6"	13	4	1899
268	Roberts, P., Jr.	7593	....	Steel.	11700	580'	58'	32'	35	3	1913
24	Roberts, W. T.	5359	....	Steel.	9500	504'	54'	30'	30	3	1906
267	Robinson, C. S.	6829	....	Steel.	10000	525'	55'	31'	31	3	1906
142	Robinson, S. W.	1655	....	Steel.	3000	244'	43'	21'	6	1	1912
141	Rock Ferry (Can.)	1398	738	Wood.	2000	285' 3"	37' 2"	18' 7"	6	1	1882
136	Rochester	4571	3855	Steel.	5200	382' 6"	50'	30'	10	3	1907
268	Rocketteller, Frank	2759	2013	Steel.	5200	366'	45'	26'	10	3	1896
268	Rogers, Henry H.	7053	5444	Steel.	11500	580'	58'	32'	36	3	1906
145	Rogers, Wm. A.	6534	5101	Steel.	10000	525'	55'	31'	32	3	1905
270	Rolph, John (Can.)	211	212	Wood	500	136' 6"	37' 8"	10' 3"	7	1	1883
238	Roumania	1837	1441	Wood.	2600	273'	39' 5"	22' 6"	7	1	1887
165	Royalite (Can.)	....	....	Steel.	500	250'	43'	18'	1915		1915
123	Rudolph, Wm.	267	209	Wood.	500	145'	23' 6"	9' 3"	5	1	1880
142	Rugee, John	1216	950	Wood.	1700	216'	35'	20'	5	1	1888
Barges											
13	Redington, Nellie	816	775	Wood.	1400	205' 9"	33' 8"	13' 9"	6	1	1872
144	Redfern, C. E.	680	646	Wood.	1300	181'	35'	13' 1"	6	1	1890
253	Redfern, J. H. (Can.)	208	....	Wood.	400	122' 1"	24' 1"	8' 6"	....	....	1907
47	Reed, Isabella (Can.)	480	....	Wood.	1000	186'	31' 5"	11'	....	....	1881

13	Rene, J. G. (Can.) ..	870	Wood.	1700	197' 5"	36' 7"	15' 2"	1891
266	Richland Daisy	1046	Wood.	2100	211'	35'	16' 6"	1893
47	Rickarton (Can.)		Wood.	2200	220'	36' 2"	22'	1890
253	Robertson, J. (Can.) ..	152	Wood.	300	108'	23'	7' 2"	1898
268	Roebbling, John A. ...	4692	Steel	790'	436'	50'	28' 6"	1398
Steamers								
207	St. Louis	985	Wood.	1200	193'	31' 9"	11' 7"	1864
328	Sachem	739	Wood.	Sand	187'	34'	14' 8"	1889
91	Sacramento	2380	Wood.	3500	308'	43'	22' 6"	1895
26	Saginaw (Can.)	357	Wood.	500	142'	25' 10"	10'	1873
47	Sarnian (Can.)	2656	Steel.	4700	324'	42'	26' 6"	1895
165	Sarnalite (Can.)	1319	Steel.	250'	250'	36'	17'	1916
173	Sarnor (Can.)	4426	Wood.	1900	219'	50'	18'	1888
267	Saturn	6657	Steel.	6800	416'	55'	28'	1900
145	Saunders, E. N., Jr. ..	449	Steel.	9700	525'	31'	31'	1906
69	Sawyer, Philetus	746	Wood.	650	152'	31' 6"	9' 6"	1884
144	Sawyer, Wm. H.	7521	Wood.	1100	201'	37'	13'	1890
268	Schiller, Wm. B.	5819	Steel.	11500	580'	58'	32'	1910
73	Schneider, A. E. R. ...	3784	Steel.	9000	540'	59'	33' 6"	1900
73	Schneider, Cletus ..	745	Steel.	5800	360'	50'	28'	1892
65	Schoolcraft (Can.) ..		Wood.	1000	180'	34'	15'	1884
298	Schoonmaker, Col. J. M.	8603	Steel.	12200	590'	64'	33'	1912
253	Scotsman (Can.)	265	Wood.	300	108'	23' 6"	7'	1903
208	Scranton	2015	Steel.	3000	260'	39'	24' 6"	1888
47	Seguin (Can.)	1141	Steel.	1200	207'	34' 2"	13'	1890
19	Seither, Frank	3887	Steel.	5700	356'	50'	28'	1904
267	Sellwood, Joseph	6741	Steel.	10000	525'	55'	31'	1906
280	Senator	4048	Steel.	6000	410'	45' 6"	28'	1896
141	Senator Derbyshire (Can.)	1246	Wood.	2200	220'	40'	18'	1897

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel Length	Beam	Depth			
Steamers											
171	Shaughnessy, Sir Thomas	6276	4665	Steel.	8500	480'	52'	30'	28	3	1906
268	Shaw, Howard L. . .	4901	3802	Steel.	7400	428'	51' 6"	28'	13	4	1900
145	Shaw, Quincy A. . .	6336	5013	Steel.	9500	504'	54'	30'	30	4	1911
275	Shaw, Charles H. (Can.)	1439		Wood.		240'	42'	14' 9"			1889
72	Sheadle, J. H.	6924	5476	Steel.	10200	530'	56'	31'	31	3	1906
91	Shenandoah	2251	1880	Wood.	3500	308'	43'	22' 6"	8	1	1894
298	Shenango	8047	6498	Steel.	11500	585'	58'	32'	35	3	1909
267	Sherwin, John	6979	....	Steel.	9600	514'	54'	31'	16	4	1904
268	Sheras, McGilivray. .	4803	....	Steel.	6800	420'	50'	28'	12	4	1904
208	Shores, E. A., Jr. . . .	520	396	Wood.	750	176'	35'	11' 6"			1892
16	Shrigley, James H. (Can.)	459	364	Wood	700	171' 6"	31'	13'	3	1	1881
337	Sicken, M.	212	168	Wood.	350	128' 10"	26'	10'	3	1	1884
268	Siemens, Sir. Wm. . .	4344	3293	Steel.	6000	412'	48'	28'	12	4	1896
323	Sierra	4846	4287	Steel.	7500	438'	52'	28'	13	3	1906
224	Simla (Can.)	1196	730	Wood	1650	225' 6"	34' 8"	15'	6	1	1903
323	Sinaloa	4539	3503	Steel.	6800	416'	50'	28'	23	4	1903
267	Sirius	4470	3143	Steel.	6900	416'	50'	28'	12	4	1903
145	Slick, E. E.	6971	....	Steel.	10200	530'	56'	31'	32	3	1908
134	Smith, B. Lyman . . .	4271	3017	Steel.	6300	380'	50'	28'	11	4	1903
2	Smith, Home (Can.) .			Steel.	5500	346'	48'	28'			1901





GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Hull No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel Length	Beam	Depth			
Barges											
309	S. O. Co. "C"	3200		Steel.	Oil	366'	44'	22' 2"			1897
165	S. O. Co. "41" (Can.)	481		Steel.	Oil	156' 6"	30'	12'			1903
255	St. Louis (Can.)	334		Wood.	500	127' 7"	26'	11' 9"			1877
267	Sagamore	3251	2926	Steel.	5500	366'	44'	26'	12	3	1898
262	Sands, Isabella (Can.)										
177	Scotia	230	231	Wood.	1500	134'	29'	10' 8"			1874
13	Selkirk (Can.)	903	858	Wood.	1200	210' 9"	34' 6"	13' 4"	7	1	1873
142	Sherman, W. A.	519	493	Wood.	900	183'	34' 5"	14' 5"			1894
288	Simpson, Lucia A. ..	227	215	Wood.	425	163'	33'	12'			1882
64	Skeele, E. E.		199	Wood.	425	127'	28'	8' 7"			1875
268	Smeaton, John	5049	4725	Steel.	7900	122'	26'	9' 6"	15	4	1856
292	Stafford	199	189	Wood.	375	112'	25' 6"	9' 6"			1868
13	Stephenson, Isaac ..	461	438	Wood.	850	163' 3"	32' 1"	11' 1"			1879
Steamers											
267	Taylor, Moses	4772	3401	Steel.	6800	416'	50'	28'	12	4	1902
346	Taplin, Frank E.	4961		Steel.	7400	420'	52'	28'			1908
267	Taurus	4470	3143	Steel.	6900	414'	50'	28'	12	4	1903
2	Taylor, J. F. (Can.) ..	3428	2029	Steel.	5600	346'	48'	28'	10	3	1901

GENERAL DIMENSIONS OF LAKE VESSELS—Continued

Fleet No.	NAME	Gross Tonnage	Net Tonnage	Built of	Carrying Capacity	DIMENSIONS			No. H'tchs	No. Comp.	Year Built
						Keel L'gth	Beam	Depth			
Steamers											
136	Underwood, F. D. . .	3314	2499	Steel	319'	44'	27'	3"			1896
36	United Lumberman (Can.)	399	259	Wood	139'	31' 6"	11'	7"			1884
182	Upson, Andrew S. . .	4442	3120	Steel.	6300	330'	52'	29'	19	3	1909
346	Upson, J. E.	6309	4853	Steel.	9500	504'	54'	30'	30	3	1908
267	Uranus	4426	....	Steel.	6800	416'	50'	28'	22	4	1900
136	Utica	3533	2658	Steel.	4000	325'	44'	30'			1904
246	Utley, E. H.	6287	4861	Steel	9500	504'	54'	30'	30	4	1910
Barges											
224	Ungava (Can.)	1226	1226	Steel.	2100	200'	41'	19'	6		1906
Steamers											
256	Van Allen, D. R. (Can.)	318	216	Wood.	450	136'	26'	10'			1874
224	Valcartier (Can.) . .	3755	2250	Steel.	5600	354'	48'	28'	10	4	1903
267	Vega	4382	....	Steel.	7000	420'	50'	28'	23	3	1906
232	Venezuela	2125	1733	Wood.	2800	263'	42' 6"	23'	7	1	1897
267	Venus	3719	2766	Steel.	5600	346'	48'	28'	10	3	1901
267	Verona	6186	4765	Steel.	8500	480'	52'	30'	28	4	1907
267	Victory	4527	3707	Steel.	7000	452'	48'	27'	14	5	1895
214	Viking	1117	943	Steel.	1800	217'	37'	15'	5	1	1889
224	Vinmount (Can.) . . .	1759	....	Steel.	2900	260'	38'	23'			1889

270	Whitbeck, Henry ...	498	473	Wood.	1000	167' 6"	33' 1"	11'	1890
253	Wilson, Agnes (Can.)	225		Wood.		126'	27' 3"	7' 8"	1916
13	Woodlands		618	Wood.	1100	186'	32' 6"	12' 4"	1881
22	Woolson, Mary	708	673	Wood.	1300	179' 1"	34' 8"	13' 2"	5 1 1885
296	Wright, A. W.	530	507	Wood.	1000	169' 7"	33' 3"	10' 8"	4 1 1880
13	Winnipeg (Can.)	734		Wood.	1300	179' 5"	34' 6"	14' 5"	1893
116	Wisconsin	532		Wood.		181'	30'	20' 6"	1882
300	Whitbeck, Henry ...	581		Wood.	1000	167' 6"	33' 1"	11'	1880
Steamers									
24	Yates, Harry	6077	4927	Steel.	9700	504'	56'	30'	30 4 1910
214	Yorkton (Can.)	1771	1136	Steel.	2800	250'	42' 6"	18' 6"	6 3 1911
286	Yosemite	3879	3044	Steel.	5600	356'	50'	28'	10 3 1901
Barges									
66	York State	277	256	Wood.	500	134'	28' 4"	11'	1869
Steamers									
268	Zelsing, August	...	...	Steel.	12000	530'	60'	30'	35 3 1917
268	Zenith City	3850	...	Steel.	5800	337'	48'	28'	11 4 1895
22	Zillah	748	583	Wood	1100	201' 8"	37'	13'	4 1 1890
Barges									
141	Zapotec	811		Wood.	1500	204' 7"	34' 7"	14' 6"	1890

CAR FERRIES OF

Fleet No.	STEAMERS	Net Tonnage	Gross Tonnage	Built of	DI
					Keel Length
7½	Str. Ann. Arbor No. 3	996	1677	Steel.	259'
7½	Str. Ann Arbor No. 4	1082	1884	Steel.	259'
7½	Str. Ann Arbor No. 5	1961	2884	Steel.	378'
7½	Str. Ann Arbor No. 6	2756	....	Steel.	338'
263	Str. Ashtabula	1525	2670	Steel.	338'
28	Str. Chief Wawatam	1793	2990	Steel.	332'
132	Str. Detroit	1307	2089	Steel.	284'
131½	Str. Grand Haven	1643	2320	Steel.	306'
132	Str. Great Western (Can.)	662	1080	Iron..	220'
132	Str. Huron (Can.)	688	1052	Iron..	238' 5"
265	Str. International (Can.)	851	....	Comp.	210'
132	Str. Lansdowne (Can.)	908	1571	Iron..	294'
51	Str. Lyon, Charles (Can.)	1127	1600	Steel.	248'
325	Str. Maitland No. 1 .....	..	5757	Steel.	338'
203	Str. Marquette & Bessemer No. 1	998	1732	Steel.	241'
203	Str. Marquette & Bessemer No. 2	1516	2583	Steel.	338'
53	Str. Michigan	1615	1730	Steel.	297'
319	Str. Michigan Central	999	1522	Iron..	263'
131½	Str. Milwaukee	1755	2933	Steel.	338'
53	Str. Ontario (Can.)	1018	1615	Steel.	297'
249	Str. Ontario No. 1 (Can.) .....	....	5146	Steel.	306'
249	Str. Ontario No. 2 (Can.) .....	....	5568	Steel.	307' 6"
265	Str. Pere Marquette	1634	2443	Steel.	338'
265	Str. Pere Marquette No. 14	1655	2531	Steel.	350'
265	Str. Pere Marquette No. 17	1685	2775	Steel.	338'
265	Str. Pere Marquette No. 18	1660	2777	Steel.	338'
265	Str. Pere Marquette No. 19	1548	2626	Steel.	338'
265	Str. Pere Marquette No. 20	1495	2626	Steel.	338'
132	Str. Transfer	1060	1511	Steel.	265'
132	Str. Transport	797	1594	Iron..	254'

THE GREAT LAKES

MENSIONS		Year Built	By Whom Built	Where Built
Beam	Depth			
52'	18' 6"	1898	Globe Iron Works.	Cleveland, Ohio.
52'	19'	1906	American Ship Building Co.	Cleveland, Ohio.
56'	21'	1910	Toledo Ship Building Co.	Toledo, Ohio.
56'	20' 6"	1917	Great Lakes Eng. Works.	Ecorse, Mich.
56'	20' 6"	1906	Great Lakes Eng. Works.	St. Clair, Mich.
62'	25'	1911	Toledo Ship Building Co.	Toledo, Ohio.
64'	19' 6"	1904	Great Lakes Eng. Works.	Ecorse, Mich.
54'	20'	1903	Craig Ship Building Co.	Toledo, Ohio.
40' 2"	13'	1866	Grand Trunk Ry. Co.	Windsor, Ont.
53' 9"	12' 8"	1875	Smith.	Pt. Edward, Ont.
41' 3"	13'	1884	Detroit Dry Dock Co.	Detroit, Mich.
40'	22'	1907	Polson Iron Works.	Toronto, Ont.
56'	20' 6"	1916		
43'	21' 6"	1904	Buffalo Ship Building Co.	Buffalo, N. Y.
56'	19' 6"	1910	American Ship Building Co.	Cleveland, Ohio.
41'	15'	1891	F. W. Wheeler & Co.	W. Bay City, Mich.
40'	12' 8"	1872	.....	Fort Erie, Ont.
45' 6"	15' 6"	1884	Detroit Dry Dock Co.	Wyandotte, Mich.
56'	19' 6"	1903	American Ship Building Co.	Cleveland, Ohio.
41' 3"	14' 9"	1891	Polson Iron Works.	Toronto, Ont.
54'	20' 6"	1907	Canadian Ship Building Co.	Toronto, Ont.
54'	20' 6"	1915	Polson Iron Works.	Owen Sound, Ont.
52'	21'	1904	Detroit Ship Building Co.	Detroit, Mich.
56'	28'	1896	F. W. Wheeler & Co.	W. Bay City, Mich.
56'	19' 6"	1901	American Ship Building Co.	Cleveland, Ohio.
56'	19' 6"	1910	American Ship Building Co.	Chicago, Ill.
56'	19' 6"	1903	American Ship Building Co.	Cleveland, Ohio.
56'	19' 6"	1903	American Ship Building Co.	Cleveland, Ohio.
45' 6"	17'	1888	Cleveland Ship Bldg. Co.	Cleveland, Ohio.
46'	14' 9"	1880	Detroit Dry Dock Co.	Wyandotte, Mich.

PASSENGER BOATS OF THE GREAT LAKES—Continued.

Fleet No.	Vessel	Gross Tonnage	Built of	Keel Length	Beam	D	Year Built
128	Ada Alice (Can.)	60	Wood	66' 5"	13' 2"	17' 6"	1789
129	Alabama	2626	Steel	250'	44'	17'	1910
52	Alberta (Can.)	2328	Steel	296' 5"	38' 2"	23' 3"	1883
47	Aletha (Can.)	171	Wood	107' 4"	19' 7"	5' 5"	1901
168	Algoma (Can.)	107	Wood	104'	26' 3"	11'	1901
28	Algomah	486	Wood	127'	33'	11'	1881
329	America	937	Wood & Steel	132' 6"	27'	13'	1898
47	America (Can.)	521	Wood & Iron	153' 2"	33' 2"	6' 4"	1895
189	Americana	969	Steel	203'	45'	16'	1908
335	Areil	302	Wood	95'	29'	11'	1881
129	Arizona	1041	Wood	203'	40'	20' 2"	1889
291	Arrow	365	Wood & Steel	165'	28'	17' 6"	1895
52	Assiniboia (Can.)	3879	Steel	336'	43' 6"	26' 6"	1907
52	Athabasca (Can.)	370	Steel	298' 8"	38' 2"	23' 3"	1883
37	Agwinde (Can.)	417	Steel	105'	22' 5"	4'	1900
331	Alexandra (Can.)	467	Wood	148'	45' 4"	8' 1"	1903
201	Armenia (Can.)	328	Wood	176' 2"	25'	11' 5"	1873
230	Auger Anotini (Can.)	67	Wood	120'	23'	7' 2"	1907
240	Bain, Jessie (Can.)	199	Wood	70' 8"	14' 8"	5'	1888
168	Bawating (Can.)	167	Wood	104'	29'	22'	1875
139	Beauharnois (Can.)	169	Wood	130' 5"	18' 3"	7' 1"	1845
244	Belle of Lamagami (Can.)	227	Wood	100'	22' 6"	6' 2"	1906
301	Bon Ami (Can.)	428	Wood	102'	22'	5' 8"	1876
225	Britannia (Can.)	551	Wood	160' 8"	25' 6"	9' 2"	1866
233	Canada		Wood	135' 2"	24' 2"	11' 5"	1872

Passenger Boats

259

273	Beard, James	87	Wood	73'	17'	6'	1873
47	Bellville (Can.)	1223	Iron	200' 8"	28'	11'	1864
324	Bluebell (Can.)	12	Wood	48' 5"	8' 9"	3' 6"	1888
57	Boeckling, G. A.	323	Steel	140'	30'	9'	1909
229	Bon Ami	227	Wood	108'	22'	5' 8"	1876
94	Boucherville (Can.)	419	Wood	178' 9"	26' 3"	9' 2"	1886
97	Britannia	791	Steel	164'	45'	17' 9"	1906
47	Brockville (Can.)	191	Wood	105'	21' 5"	5' 7"	1898
189	Canadiana	974	Steel	203'	45'	16'	1910
87	Caribou (Can.)	596	Wood	150'	27'	12'	1904
108	Carolina	1304	Iron	220'	40'	21'	1892
163	Casplan (Can.)	957	Iron	177' 6"	43' 4"	6' 7"	1846
331	Castor (Can.)	88	Wood	66'	22'	5' 2"	1907
204	Cayuga (Can.)	2167	Steel	306'	36' 6"	15'	1906
224	Chance (Can.)	5	Wood	43' 1"	7' 1"	3' 6"	1895
230	Charlie M. (Can.)	50	Wood	74' 5"	11'	5'	1897
296	Chicora (Can.)	930	Wood	221'	26'	10' 9"	1864
236	Chippewa (Can.)	1514	Wood & Steel	308' 5"	36' 3"	12' 5"	1893
9	Chippewa	453	Iron	201'	28'	12'	1884
98	City of Alpena II.	1735	Wood & Steel	266'	38' 4"	24'	1893
130	City of Benton Harbor						
74	City of Buffalo	1286	Steel	248'	37'	15' 6"	1904
285	City of Sady Smith (Can.)	2940	Wood & Steel	340' 3"	43' 5"	17' 4"	1896
308	City of Chatham (Can.)	35	Wood	69' 6"	16'	5' 2"	1900
273	City of Cheboygan	362	Wood	125' 6"	31' 5"	9'	1888
98	City of Cleveland III	247	Wood	98'	29' 9"	10'	1890
98	City of Detroit II.	4568	Steel	402'	54'	22'	1907
98	City of Detroit III	1919	Wood & Steel	286'	41'	25' 8"	1889
80	City of Dover (Can.)	6061	Steel	472'	55'	22'	1912
74	City of Erie	81	Wood	74' 8"	20' 4"	7'	1916
		2498	Wood & Steel	316'	44'	29'	1898

PASSENGER BOATS OF THE GREAT LAKES—Continued

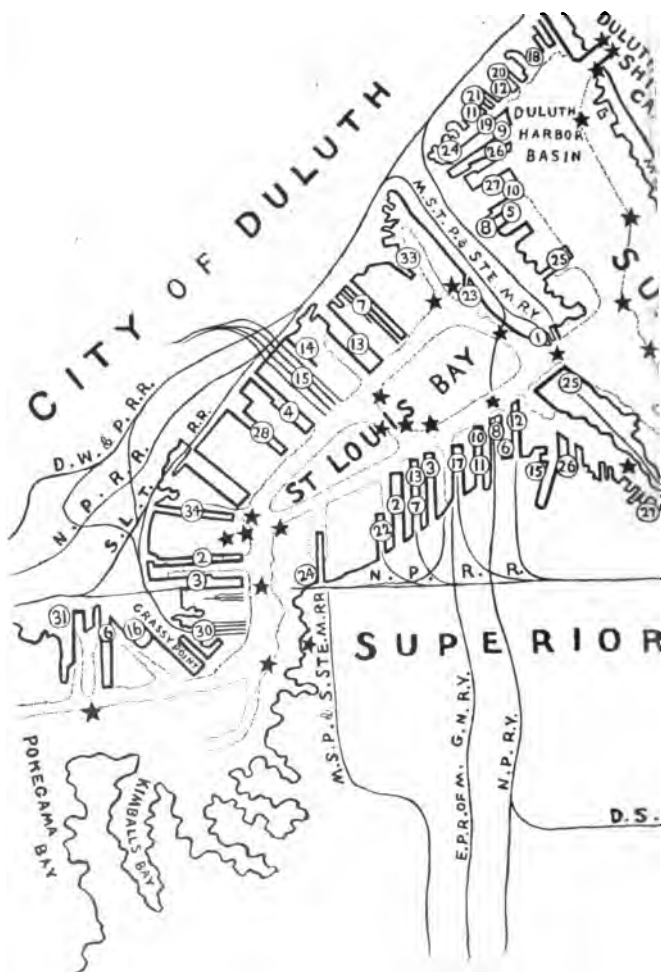
Fleet No.	VESSEL	Gross Tonnage	Built of	Keel Length	Beam	Depth	Year Built
130	City of Grand Rapids	3061	Steel	291'	48'	27'	1912
88	City of Halley (Can.)	38	Wood	67'	12' 3"	6' 7"	1808
49	City of Hamilton	1574	Wood & Steel	220'	32' 5"	14'	1871
82	City of London (Can.)	110	Wood	84'	18'	5' 5"	1886
153	City of Marquette	341	Wood & Steel	266'	38'	24' 4"	1893
98	City of Mackinac II.	1749	Wood	114'	25'	9'	1890
47	City of Ottawa (Can.)	1529	Wood & Iron	220'	32' 5"	14'	1871
68	City of So. Haven	1719	Steel	232'	40'	16'	1903
98	City of St. Ignace	1923	Wood & Steel	272'	40'	25' 6"	1886
130	City of St. Joseph	1439	Wood & Steel	254'	34'	24'	1890
341	City of Toledo	1003	Wood & Steel	212'	31' 6"	22' 3"	1891
259	Clark, Alfred (Can.)	227	Wood	110'	24'	7' 6"	1887
303	Clark Brothers (Can.)	92	Wood	80'	16' 2"	5' 5"	1890
127	Cleopatra (Can.)	104	Wood	113' 5"	16' 9"	9' 2"	1893
198	Colomb (Can.)	569	Wood	120' 6"	34'	15' 5"	1910
284	Columbia	139	Wood	109'	21' 6"	16' 3"	1893
197	Columbia	968	Steel	216'	45'	12' 6"	1902
199	Columbia	255	Wood	133' 6"	29'	9'	1885
129	Columbus, Christopher	1511	Steel	348'	42'	24'	1893
273	Conger, O. D.	199	Wood	92'	26'	11'	1882
236	Carona (Can.)	1274	Steel	270' 3"	32' 5"	12' 5"	1896

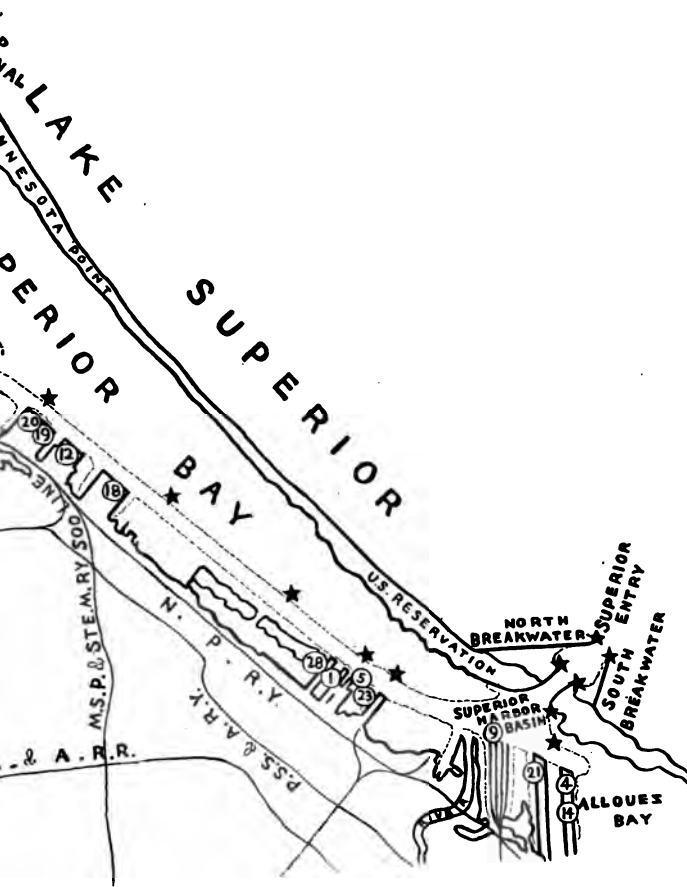
237	Dalhousie City (Can.)	1256	Steel	199' 8"	37'	20' 7"	1911
273	Dormer, Grace	65	Wood	71'	17' 6"	5' 6"	1868
183	Duchess of York (Can.)	490	Steel	156' 8"	25' 3"	9' 4"	1889
98	Eastern States	3077	Steel	350'	45' 3"	19' 6"	1902
9	Elva	81	Wood	71'	18'	16' 6"	1889
342	Empress (Can.)	678	Iron	185' 3"	27' 6"	16'	1873
225	Emerald (Can.)	385	Wood	140'	21' 7"	6' 8"	1903
97	Excelsior	229	Wood	116'	25'	13' 6"	1876
335	Essex	266	Steel	94'	36'	14' 7"	1913
225	Filgate (Can.)	571	Steel	175'	39' 6"	9' 6"	1891
299	Forest City (Can.)						
331	Fraser, Alexander (Can.)	320	Wood	140'	41'	7' 5"	1890
205	Garden City (Can.)	637	Steel	177' 9"	26'	10'	1892
97	Garland	248	Wood	107'	29'	12'	1880
129	Georgia	895	Wood	196'	34' 6"	20'	1880
169	Glen Allen (Can.)	276	Comp.	104'	25'	9'	1912
331	Green, G. B. (Can.)	259	Wood	133' 2"	44' 8"	8'	1896
169	Glenn	277	Wood	108'	22'	17'	1889
195	Gray, G. R. (Can.)	268	Steel	115' 7"	34' 8"	12' 6"	1917
341	Greyhound	1392	Steel	276'	38'	15'	1902
47	Hamilton (Can.)	937	Iron	175' 2"	25' 2"	10' 8"	1895
331	Hamilton (Can.)	320	Steel	341'	50'	35'	1909
47	Hamonic (Can.)	5264	Steel	341'	50'	35'	1909
303	Hanlan, John (Can.)	37	Wood	71'	16'	6'	1884
316	Hart, Eugene C.	522	Wood	152'	25'	18'	1890
149	Harrison (Can.)	222	Wood	120'	22' 2"	10' 6"	1909
27	Hayes, R. B.	164	Wood	134'	21'	7'	1876
172	Hazel	66	Wood	87'	18'	14'	1879
273	Hiawatha (Can.)	163	Wood	92' 7"	20'	7' 6"	1874
166	Huron	538	Wood & Iron	200'	32'	21'	1885
47	Huron (Can.)	3329	Steel	308'	43'	27'	1902

PASSENGER BOATS OF THE GREAT LAKES—Continued

Fleet No.	VESSEL	Gross Tonnage	Build of	Keel Length	Beam	Depth	Year Built
352	Illinois	2427	Steel	225'	40'	26'	1899
129	Indiana	95	Wood	223'	35'	24'	1890
324	International (Can.)	23	Wood	182'	30'	10'	1881
157	Island Queen (Can.)	235	Wood	73'	13' 9"	4' 4"	1889
9	Island Belle	291	Wood	100'	20' 6"	5' 8"	1897
230	Islander (Can.)	165	Wood	139'	23'	17'	1895
324	Jasmine (Can.)	298	Wood	100'	17' 4"	5' 7"	1900
206	Jaska (Can.)	189	Wood	112' 4"	21' 9"	7' 4"	1892
161	Joe (Can.)	57	Wood	108'	24' 4"	7' 3"	1909
136	Juniata	4333	Steel	65'	13'	4' 9"	1900
215	Kansas	835	Wood	340'	45'	28'	1905
52	Keewatin (Can.)	3856	Steel	185'	33'	19'	1876
47	Kingston (Can.)	2925	Steel	336'	43' 6"	26' 6"	1907
10	Kirby, Frank E.	532	Iron	288'	36' 2"	13' 3"	1901
156	Lakeside (Can.)	348	Wood	195'	30'	20'	1890
191	Lewis, Elgin (Can.)	50	Wood	121'	26'	9' 3"	1888
78	Liberty	143	Wood	70'	12' 3"	5'	1904
324	Luella (Can.)	38	Wood	97'	19'	13' 6"	1889
236	Macassa (Can.)	459	Steel	66'	13' 3"	6'	1880
52	Manitoba (Can.)	2616	Steel	154' 4"	24'	16' 3"	1888
102	Manitou (Can.)	470	Wood	303'	38'	24' 6"	1889
324	Mayflower (Can.)	189	Steel	137' 2"	24' 2"	9' 1"	1903
303	Mazeppa (Can.)	146	Wood	140' 2"	28' 2"	6' 8"	1890
153	McVey, Charles	331	Wood	101'	20'	5' 7"	1884
241	Michipicottin (Can.)	511	Wood	132'	26'	17' 6"	1889
				117'	24' 8"	11'	1883

202	Maid of the Mist (Can.)	62	Wood	71' 1"	16' 1"	6' 6"	1885
244	Marie (Can.)	4	Wood	33' 5"	8' 5"	3'	1892
226	Mary Ethel	55	Wood	61' 3"	17' 6"	6' 6"	1912
152	Minnie M. (Can.)	613	Wood	140'	30'	10'	1884
215	Missouri	2434	Steel	225'	40'	16'	1904
236	Modjeska (Can.)	678	Steel	178'	31'	12' 3"	1889
47	Montreal (Can.)	4232	Steel	332' 4"	43' 5"	14' 8"	1904
47	Murray Bay (Can.)	969	Wood	104'	22'	6'	1889
47	News Boy	199	Iron	159'	21'	10' 4"	1856
54	Niagara (Can.)	396	Steel	121'	38'	14'	1910
268	Niagara Frontier	421	Wood	125'	21'	7' 6"	1887
230	Nipissing (Can.)	275	Steel	362'	52'	28' 9"	1913
47	Noronic (Can.)	6905	Steel	259'	47'	18' 3"	1913
67	North American	2317	Wood	175'	43'	10'	1868
190	North King (Can.)	873	Wood	104'	21' 6"	7' 6"	1905
242	Northern Belle (Can.)	222	Steel	358'	44'	24'	1895
93	North Land	4244	Steel	340'	45'	28'	1910
136	Octorara	4329	Wood	90' 5"	18' 4"	5' 4"	1885
212	Ongiara (Can.)	98	Wood	161' 6"	27' 8"	9'	1886
62	Ossifrage (Can.)	303	Wood	200'	32'	20'	1899
341	Owana	747	Wood & Steel	100'	24' 5"	4'	1909
235	O'Brien, M. J. (Can.)	159	Wood	120'	22' 8"	7'	1897
260	Oisean (Can.)	148	Wood	75'	14' 5"	4' 4"	1886
230	Oriole (Can.)	75	Wood	118'	28'	9' 2"	1898
38	Orleans (Can.)	269	Wood	61' 5"	17' 7"	6' 1"	1904
33	Potter 2d G. B. (Can.)	51	Wood	126' 8"	38' 3"	7' 1"	1896
43	Parthea (Can.)	198	Steel	137'	24'	11' 3"	1914
349	Pelee (Can.)	538	Wood	158'	35' 4"	8' 4"	1901
312	Pennsylvania (Can.)	428	Wood	190'	33'	22'	1887
264	Pere Marquette No. 3	924	Wood				





PASSENGER BOATS OF THE GREAT LAKES—Continued

Yr. Built	Depth	Beam	Keel Length	Build of	Gross Tonnage	VESSEL	Yr. Built
1888	22'	34' 6"	186'	Wood	941	Pere Marquette No. 4	264
1888	9' 6"	27'	125'	Wood	371	Pere Marquette No. 6	264
1888	20'	35'	171'	Wood	691	Pere Marquette No. 8	264
1888	20'	30'	171'	Wood	770	Petosky	86
1915	9' 6"	21' 5"	110"	Wood	99	Phelps, M. G.	154
1914	12' 3"	37'	162'	Steel	600	Philippe, Louis (Can.)	352
1871	7' 1"	18' 8"	123'	Wood & Iron	252	Pierrepoint (Can.)	352
1881	20' 9"	40'	209'	Iron	1921	Pilgrim	117
1884	7' 4"	22' 4"	122'	Wood	262	Pilgrim (Can.)	275
1883	16' 5"	31' 4"	118' 5"	Wood	533	Polaris (Can.)	331
1907	5' 2"	22'	66'	Wood	88	Pollux (Can.)	331
1887	7' 2"	36'	139'	Wood	272	Powell, C. B. (Can.)	331
1896	8'	31' 6"	202'	Wood	899	Prefontaine (Can.)	131
1888	9'	25' 2"	130'	Wood	337	Premier (Can.)	77
1894	13' 7"	39'	128'	Wood	489	Pleasure	97
1887	6'	21'	78'	Wood	114	Plow Boy	199
1874	6'	18'	79'	Wood	92	Plumb, Henry	47
1876	13' 6"	25'	116'	Wood	229	Pontiac	97
1890	6' 8"	28'	140'	Steel	189	Primrose (Can.)	324
1892	15'	38'	119'	Wood	473	Promise	97
1901	24' 6"	40'	260'	Steel	1762	Puritan	352
1911	17' 3"	46'	227'	Steel	1182	Put-in-Bay	10
1906	12'	39'	303'	Steel	3453	Quebec (Can.)	47

47	Ramona	57	Steel	95'	13'	7'	1884
161	Ramona (Can.)	102	Wood	77' 4"	19'	5'	1894
47	Rapids King (Can.)	1801	Steel	230'	40'	10'	1907
47	Rapids Prince (Can.)	1384	Steel	196'	37'	9' 8"	1910
47	Rapids Queen (Can.)	1307	Steel	194' 4"	33'	8' 8"	1892
282	Rapids King (Can.)	266	Wood	107'	23' 4"	6'	1893
282	Rideau Queen (Can.)	351	Wood	108'	27' 3"	6' 9"	1900
75	Roosevelt, Theo.	1955	Steel	264'	40'	16'	1906
47	Rochester	1603	Steel	246' 6"	42'	14' 9"	1910
47	Saguenay (Can.)	2777	Steel	258'	40'	14' 9"	1911
230	Sagamo (Can.)	744	Wood	152'	29'	9' 7"	1906
150	Sailor Boy	162	Wood	91'	24'	6' 6"	1891
97	Sappho	223	Wood	107'	31'	13'	1883
74	Seandabee	6381	Steel	485'	58'	23' 6"	1913
70	Soo City (Can.)	500	Wood	135'	25'	9'	1889
67	South American		Steel	291'	47'	18'	1914
74	State of Ohio	1221	Wood & Iron	225'	32'	22'	1880
97	Ste. Clarie	870	Steel	181'	50'	17' 6"	1910
47	St. Irene (Can.)	1768	Iron	248'	31'	11'	1866
47	St. Lawrence (Can.)	312	Wood	154'	21'	7'	1884
47	Syracuse (Can.)	2105	Steel	205' 6"	43' 6"	11' 6"	1911
47	Tadausac (Can.)	1071	Wood	248' 4"	34' 7"	9' 6"	1879
341	Tashmoo	1344	Steel	306'	36'	22' 3"	1900
150	Thistle	49	Wood	80'	14'	6'	1887
47	Thousand Islander	355	Steel	164'	32'	9' 6"	1912
136	Tionesta	4329	Steel	340'	45'	28'	1903
47	Toronto (Can.)	2779	Steel	269' 4"	36'	13' 8"	1899
324	Trillium (Can.)	673	Steel	135'	30'	8' 4"	1910
47	Trois Rivières (Can.)	1449	Iron	219' 8"	32'	9' 6"	1869
236	Turbinia (Can.)	1064	Steel	250'	33'	13'	1904
47	Varuna (Can.)	134	Wood	94' 4"	17'	5' 1"	1880
97	Victoria	192	Wood	96'	28'	11' 6"	1872
233	Victoria (Can.)	181	Wood	100'	21'	5' 6"	1899

PASSENGER BOATS OF THE GREAT LAKES

Fleet No.	VESSEL	Gross Tonnage	Built of	Keel Length	Beam	Depth	Year Built
331	Wabis (Can.)	77	Wood	66'	23' 1"	5'	1911
47	Water Lily (Can.) ..	136	Wood	97' 1"	19' 2"	7' 8"	1891
39	Water Lily (Can.) ..	54	Wood	80' 1"	12'	5' 2"	1897
28	Wau-Kon	137	Wood	95'	19'	16'	1883
47	Waubic (Can.)	504	Steel	135'	26'	9'	1909
341	Wauketa	903	Steel	175'	38' 4"	14'	1908
112	Webster, John	136	Wood	101' 1"	26' 2"	7' 2"	1917
79	Wehrle, A., Jr.	421	Wood	148'	26' 6"	9'	1888
98	Western States	3077	Steel	350'	45' 3"	19' 6"	1902
226	Wilson, Anna C.	83	Wood	91'	20' 4"	6' 5"	1912
20	Woods, Frank	384	Wood	120'	26'	18'	1888

LAKE VESSELS WHOSE NAMES HAVE BEEN CHANGED.

	New Names	Old Names		New Names	Old Names
S S.	Adams, Cuyler—Sahara	Bge.	Brookdale—Moravia		
S S.	Advance—Sir L S Tilley	S S.	Brown, Fayette—Chas. Hutchinson		
S S.	Agassiz, R L—Wm A Hawgood	S S.	Brown, Harvey H—Harry A Berwind		
S S.	Agnes W—Roswell P Flower	S S.	Burnham, Geo—Flora Webster		
S S.	Amazon—Amazon (Sch)	S S.	Cabotia—Hiawatha		
S S.	Arcturus—James B Wood	S S.	Cadillac—Steel King		
S S.	Argus—H S Holden	S S.	Caledonia—W B Morley		
S S.	Arizona—City of Racine	S S.	Campbell, J A—Alton C Dustin		
Sch.	Arthur—G C Trumpff	S S.	Canoble—Iron King		
Bge.	Arthur—D P Rhodes	S S.	Canopus—George H Russel		
Tug	Ashland—A C VanRaalte	S S.	Carbray, Felix—John C Gault		
S S.	Atikokan—John B Trevor	S S.	Carolina—C H Hackley		
Bge.	Atlasco—Russel Sage (Str)	S S.	Cataract—Cataract (Bge)		
Bge.	Aurora—Aurora (Str)	S S.	Central West—J J McWilliams		
S S.	Australia—Australia (Sch)	S S.	Cepheus—F W Gilchrist		
Tug	Barr, E C—Smith	S S.	Cetus—Henry S Sill		
S S.	Bacoi—Calgary	S S.	City of Hamilton—Japan		
S S.	Barnum, G G—Socapa	S S.	City of Ottawa—India		
S S.	Barth, L L—S S Wilhelm	S S.	City of St. Ignace—City of Cleveland		
S S.	Belgium—H S Wilkenson	S S.	City of St. Joseph—City of Chicago		
S S.	Bickerdike—Arabia	S S.	Clarke, E A S—H P Bope		
S S.	Billings, Frank—Champlain	S S.	Colin W—Stanstead		
S S.	Binghamton—J H Jewett	S S.	Collins, E C—Edw F Holmes		
S S.	Block, Joseph—Arthur H Hawgood	S S.	Columbia—Mascotte		
S S.	Booth, Edwin L—D M Whitney				
S S.	Breitung, Charlotte G—Yale				
S S.	Breitung, Edward N—Moore, John W				

	New Names	Old Names		New Names	Old Names
S S.	Compton—Eastwood		S S.	Follette, James W—Jess H Farwell	
Tug	Conqueror—Wm L Proctor		S S.	Franz, W C—Uranus	
S S.	Cooke, Delos W—Starrucca		Bge.	Freeport—E P Beals	
Bge.	Corry, Mike—J O Thayer				
S S.	Cort, Henry—Pillsbury		S S.	Georgia—City of Ludington	
S S.	Corvus—J L Weeks		S S.	Glenfinnan—Minnetonka	
Bge.	Crane, J L—Theo S Fassett		S S.	Glenisla—Western Star	
S S.	Crawford, G G—LeGrand		S S.	Glenlivet—Wawatam	
	DeGraff		S S.	Glenlyon—Minnekahta	
S S.	Croft, Harry W—Fred G Hartwell		S S.	Glenmount—Omega	
S S.	Crosby, E G—Naomi		S S.	Glenorchy—A E Stewart	
S S.	Cygnus—J C Gilchrist		S S.	Glenshee—Howard M. Hanna, Jr	
Bge.	Cyrenian—Prussia		S S.	Gorizia—Glenmount	
			S S.	Grand Island—Eugene Zimmerman	
S S.	Dawson, Sir Trevor—W C Moreland				
S S.	Derbyshire, Senator—Bermuda		S S.	Hall, Henry B—Iron Duke	
S S.	Dimmick, J. K—Admiral		T S.	Harriet B—Pere Marquette No. 16	
S S.	Doric—Tadousac		S S.	Harvey, A F—Wisconsin	
			S S.	Harvey, F E—John Roberts	
S S.	Eads, J B—Globe		S S.	Hazard, F R—Ontario	
Bge.	Eddy, John F—John F Eddy (Str)		S S.	Hazard, W A—John Schroeder	
Bge.	Egan, Wiley M—Wiley Egan (Str)		MS S.	Hennepin—Geo H Dyer	
S S.	Eric W—Harry E Packer		S S.	Hettler, Herman H—Walter Vail	
			S S.	Holcomb, Ralph T—Isaac Lincoln	
S S.	Fairfax—Ionia				
S S.	Fellowcraft—Robert Mills		S S.	Home Smith—Wm S Mack	
S S.	Filbert, Wm J—Wm M Mills		S S.	Horn, Chas—Peters	
S S.	Fleetwood—Wm H. Gratick		Sch.	Hossack, W D—Bertha Barnes	

New Names		Old Names		New Names		Old Names	
S S.	House, Francis	E—William	S S.	Lupus—Gilchrist			
	B Kerr		Bge.	McAvoy, H J—A Stewart			
S S.	Howard W—John Duncan		S S.	McCullough, C H, Jr—Ward			
S S.	Hubbard, C Russell—Henry			Ames			
	A Hawgood		S S.	McCullough, John G—S C			
S S.	Huron—Darius Cole			Reynolds			
Sch.	Hutt, Hattie—F B Stock-		S S.	McLean, John H—Bransford			
	bridge		S S.	McLouth, Peirce—Hugh R			
S S.	Hydrus—M A Hanna			Havey			
			S S.	Major—John Mitchell			
S S.	Indus—Lake Shore		S S.	Malton—E M Peck			
S S.	Ionic—Cuba		S S.	Marion W—Byron Whitaker			
S S.	Iroquois—Tadenac		S S.	Marquette—E L Wallace			
S S.	Inland—I W Nicholas		S S.	Marse—E A S Clarke			
Ltr.	Isabelle H—McCormick		S S.	Marshall, Maggie—William			
				Crippen			
S S.	Jex, H N—Frontenac		S S.	Martian—Mars			
S S.	Jacob, C W—City of Paris		S S.	Mataafa—Pennsylvania			
S S.	Joyland—W A Haskell		S S.	Meaford—Newmount			
S S.	Jones, Harry R—D G Kerr		Tug	Melbourne—City of Holland			
S S.	Kansas—City of Charlevoix		S S.	Michipicoten—City of Wind-			
Bge.	Kennedy, W L—Saronic			sor			
Bge.	King, A B—Teutonia		S S.	Mills, D W—Sparta			
S S.	Kinney, A T—Caldera		S S.	Milwaukee—M M & N I			
			S S.	Mitchell, G A—Edw. Smith			
S S.	Lakeland—Cambria		S S.	Mitchell, Pentecost—H B			
S S.	Lakeport—Boston			Hawgood			
S S.	Laketon—Saxona		S S.	Morris, Effingham B—Josiah			
S S.	Lakewood—Syracuse			G Munro			
S S.	Leopold, N F—W R Wood-		S S.	Morrow, John F—Edw N			
	ford			Breitung			
S S.	Lewiston—S E Peck		S S.	Mueller—Edwin S Tice			
S S.	Liberty—Phenix		S S.	Muriel, W—Veronier			
Bge.	Liberty—City of the Straits		S S.	Munising—F M Osborne			
Tug	Lucknow—Onaping		S S.	Mooremack—Jessie Spalding			

New Names	Old Names	New Names	Old Names
S S. Natironco—Pioneer		S S. Reiss, Otto M—F B Wells	
S S. Negaunee—E N Saunders		S S. Reiss, Richard J—Geo W.	
S S. Neilson, J B—Washburn		Peavey	
S S. Nessen, N J—H L Worthington		S S. Reiss, Wm A—F H Peavey	
S S. Newbold, Arthur E—Jas Cor-rigan		Bge. Rend, W P—W P Rend (Str)	
		Bge. Rene, J G—Ceylon	
		S S. Replogle, J Leonard—Chas Weston	
S S. Oakes, Herbert K—Milinokett		S S. Richard W—Pueblo	
S S. Oatland—W J Averell		S S. Richardson, Granville A—Geo J Gould	
S S. Osborne, A W—Andrew Carnegie		S S. Richardson, R R—Jenks J M	
S S. Owana—Pennsylvania		S S. Richardson, W C—Wainwright	
S S. Overland—Kongo		Bge. Richland Daisy—Paisley	
S S. Paipoonge—Corona		S S. Richland Queen—Amazonas	
S S. Paisley, Robert R—Geo L Craig		S S. Richland Starr—Chas A Luck	
S S. Pegasus—W H Gratwick		Bge. Rickarton—Chippewa	
S S. Pere Marquette 6—Mark B Covell		S S. Riverton—L C Waldo	
S S. Perseus—F J Hecker		S S. Robbins, S H—H W Oliver	
S S. Peters—Jim Sheriffs		S S. Roberts, Wm T—E D Carter	
S S. Philbin, D M—Sylvania		S S. Robinson, C S—Loftus Cuddy	
S S. Pierce, E L—St Clair		S S. Rock Ferry—Merrimac	
S S. Polynesia—Polynesia (Sch)		S S. Rolph, John—Resolute	
Tug Pringle, Robt C—Pere Marquette 7		Bge. Sagamore—David Z Norton	
S S. Pringle, Walter R—Superior		S S. Sarnian—Chili	
		S S. Sarnor—Britannic	
S S. Recor, E P—F S Faxton		S S. Saronic—United Empire	
S S. Reeb, M A—Kensington		S S. Saturn—Walter Scranton	
S S. Regulus—J J Albright		S S. Saunders, Edward N, Jr.—Abraham Stearn	
S S. Clemens A—F T Heffelfinger			

	New Names	Old Names		New Names	Old Names
S S.	Schneider, Cletus—Thomas Adams		S S.	Taylor, J Frater—Saturn Bge.	Thunder Bay—Malta
S S.	Seither, Frank—R W Eng-	land	S S.	Turner, J J—J Q Riddle	
Bge.	Senlim—Uranus		S S.	Thom, John S—Henry R. James	
S S.	Shrias, MacGilvray—Umbria		S S.	Underwood, F D—Ramapo	
S S.	Sirius—R L Ireland		S S.	Uhrig, Edward A—Sheldon Parks	
Sch.	Skeele, Edward E—John Mee		S S.	Uranus—W E Reis	
S S.	Slick, Edwin F—Meacham, D B		S S.	Usona—Chas Beatty	
S S.	Soo City—Mabel Bradshaw		S S.	Uhrig, A B—Centurion	
S S.	Sowards—Rand		S S.	Valcartier—Wm H Mack	
S S.	State of New York—City of Mackinac		S S.	Vega—Pendennis White	
S S.	State of Ohio—City of Al-pena		S S.	Warren, Homer—Atlantic	
S S.	Staples, Gale—Caledonia		S S.	Wesee—Orlon	
S S.	Stevens, Frank B—St Joseph		S S.	Westerian—City of Montreal	
S S.	Stifel, Wm F—Normania		S S.	Westoil—Kaministiquia	
S S.	Stuart W—Collinge		S S.	Wethersfield—Westmount	
S S.	Stormount—Avon		Bge.	Whale—Ann Arbor No. 2 (Car Ferry)	
S S.	Sweden—L C Smith		S S.	Wilson, Mathew—Fayette	
S S.	Syracuse—Geronia		S S.	Windsor—Iroquois	
Sch.	Taber, Horace—Amoskeag		S S.	Winnipeg—Juniata	
S S.	Taurus—Perry G Walker		Bge.	Woodlands—Middlesex	
			S S.	Zillah—Edward Smith	

DAILY WAGE TABLE.

	\$190.00	\$170.00	\$155.00	\$140.00	\$125.00	\$110.00	\$100.00	\$85.00	\$80.00	\$75.00	\$70.00
1/2	3.17	2.83	2.58	2.33	2.08	1.83	1.67	1.42	1.33	1.25	1.17
1	6.33	5.67	5.17	4.67	4.17	3.67	3.33	2.83	2.67	2.50	2.33
2	12.67	11.33	10.33	9.33	8.33	7.33	6.67	5.67	5.33	5.00	4.67
3	19.00	17.00	15.50	14.00	12.50	11.00	10.00	8.50	8.00	7.50	7.00
4	25.33	22.67	20.67	18.67	16.67	14.67	13.33	11.33	10.67	10.00	9.33
5	31.67	28.33	25.83	23.33	20.83	18.33	16.67	14.17	13.33	12.50	11.67
6	35.00	34.00	31.00	28.00	25.00	22.00	20.00	17.00	16.00	15.00	14.00
7	44.33	39.67	36.17	32.67	29.17	25.67	23.33	19.83	18.67	17.50	16.33
8	50.67	45.33	41.33	37.33	33.33	29.33	26.67	22.67	21.33	20.00	18.67
9	57.00	51.00	46.50	42.00	37.50	33.00	30.00	25.50	24.00	22.50	21.00
10	63.33	56.67	51.67	46.67	41.67	36.67	33.33	28.33	26.67	25.00	23.33
11	69.67	62.33	56.83	51.33	45.83	40.33	36.67	31.17	29.33	27.50	25.67
12	76.00	68.00	62.00	56.00	50.00	44.00	40.00	34.00	32.00	30.00	28.00
13	82.33	73.67	67.17	60.67	54.17	47.67	43.33	36.83	34.67	32.50	30.33
14	88.67	79.33	72.33	65.33	58.33	51.33	46.67	39.67	37.33	35.00	32.67
15	95.00	85.00	77.50	70.00	62.50	55.00	50.00	42.50	40.00	37.50	35.00
16	101.33	90.67	82.67	74.67	66.67	58.67	53.33	45.33	42.67	40.00	37.33
17	107.67	96.33	87.83	79.33	70.83	62.33	56.67	48.17	45.33	42.50	39.67
18	114.00	102.00	93.00	84.00	75.00	66.00	60.00	51.00	48.00	45.00	42.00
19	120.33	107.67	98.17	88.67	79.17	69.67	63.33	53.83	50.67	47.50	44.33
20	126.67	113.33	103.33	93.33	83.33	73.33	66.67	56.67	53.33	50.00	46.67
21	133.00	119.00	108.50	98.00	87.50	77.00	70.00	59.50	56.00	52.50	49.00
22	139.33	124.67	113.67	102.67	91.67	80.67	73.33	62.33	58.67	55.00	51.33
23	145.67	130.33	118.83	107.33	95.83	84.33	76.67	65.17	61.33	57.50	53.67
24	152.00	136.00	124.00	112.00	100.00	88.00	80.00	68.00	64.00	60.00	56.00
25	158.33	141.67	129.17	116.67	104.17	91.67	83.33	70.83	66.67	62.50	58.33
26	164.67	147.33	134.33	121.33	108.33	95.33	86.67	73.67	69.33	65.00	60.67
27	171.00	153.00	139.50	126.00	112.50	99.00	90.00	76.50	72.00	67.50	63.00
28	177.33	158.67	144.67	130.67	116.67	102.67	93.33	79.33	74.67	70.00	65.33
29	183.67	164.33	149.83	135.33	120.83	106.33	96.67	82.17	77.33	72.50	67.67
30	190.00	170.00	155.00	140.00	125.00	110.00	100.00	85.00	80.00	75.00	70.00

Daily Wage Table

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Days	\$67.50	\$65.00	\$62.50	\$60.00	\$57.50	\$55.00	\$50.00	\$45.00	\$40.00	\$35.00	\$31.50	\$30.00
1/2	1.13	1.08	1.04	1.00	.96	.92	.83	.75	.67	.55	.53	.50
1	2.25	2.17	2.08	2.00	1.92	1.83	1.67	1.50	1.33	1.17	1.05	1.00
2	4.50	4.33	4.17	4.00	3.83	3.67	3.33	3.00	2.67	2.33	2.10	2.00
3	6.75	6.50	6.25	6.00	5.75	5.50	5.00	4.50	4.00	3.50	3.15	3.00
4	9.00	8.67	8.33	8.00	7.67	7.33	6.67	6.00	5.33	4.67	4.20	4.00
5	11.25	10.83	10.42	10.00	9.58	9.17	8.33	7.50	6.67	5.83	5.25	5.00
6	13.50	13.00	12.50	12.00	11.50	11.00	10.00	9.00	8.00	7.00	6.30	6.00
7	15.75	15.17	14.58	14.00	13.42	12.83	11.67	10.50	9.33	8.17	7.35	7.00
8	18.00	17.33	16.67	16.00	15.33	14.67	13.33	12.00	10.67	9.33	8.40	8.00
9	20.25	19.50	18.75	18.00	17.25	16.50	15.00	13.50	12.00	10.50	9.45	9.00
10	22.50	21.67	20.83	20.00	19.17	18.33	16.67	15.00	13.33	11.67	10.50	10.00
11	24.75	23.83	22.92	22.00	21.08	20.17	18.33	16.50	14.67	12.83	11.55	11.00
12	27.00	26.00	25.00	24.00	23.00	22.00	20.00	18.00	16.00	14.00	12.60	12.00
13	29.25	28.17	27.08	26.00	24.92	23.83	21.67	19.50	17.33	15.17	13.65	13.00
14	31.50	30.33	29.17	28.00	26.83	25.67	23.33	21.00	18.67	16.33	14.70	14.00
15	33.75	32.50	31.25	30.00	28.75	27.50	25.00	22.50	20.00	17.50	15.75	15.00
16	36.00	34.67	33.33	32.00	30.67	29.33	26.67	24.00	21.33	18.67	16.80	16.00
17	38.25	36.83	35.42	34.00	32.58	31.17	28.33	25.50	22.67	19.83	17.85	17.00
18	40.50	39.00	37.50	36.00	34.50	33.00	30.00	27.00	24.00	21.00	18.90	18.00
19	42.75	41.17	39.58	38.00	36.42	34.83	31.67	28.50	25.33	22.17	19.95	19.00
20	45.00	43.33	41.67	40.00	38.33	36.67	33.33	30.00	26.67	23.33	21.00	20.00
21	47.25	45.50	43.75	42.00	40.25	38.50	35.00	31.50	28.00	24.50	22.05	21.00
22	49.50	47.67	45.83	44.00	42.17	40.33	36.67	33.00	29.33	25.67	23.10	22.00
23	51.75	49.83	47.92	46.00	44.08	42.17	38.33	34.50	30.67	26.83	24.15	23.00
24	54.00	52.00	50.00	48.00	46.00	44.00	40.00	36.00	32.00	28.00	25.20	24.00
25	56.25	54.17	52.08	50.00	47.92	45.83	41.67	37.50	33.33	29.17	26.25	25.00
26	58.50	56.33	54.17	52.00	49.83	47.67	43.33	39.00	34.67	30.33	27.30	26.00
27	60.75	58.50	56.25	54.00	51.75	49.50	45.00	40.50	36.00	31.50	28.35	27.00
28	63.00	60.67	58.33	56.00	53.67	51.33	46.67	42.00	37.33	32.67	29.40	28.00
29	65.25	62.83	60.42	58.00	55.58	53.17	48.33	43.50	38.67	33.83	30.45	29.00
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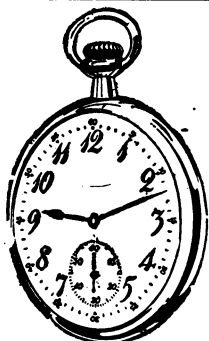
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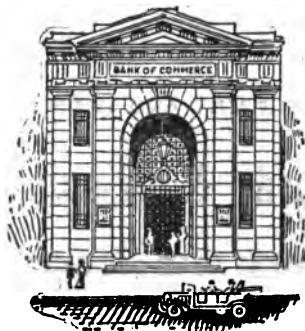
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